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ABSTRACT

The determinants of successful training practices in large Australian firms were examined. The study's three phases were as follows: (1) a review of existing literature; (2) a meta-analysis of previously conducted case studies of 49 large Australian firms in 14 industrial sectors; and (3) a comparative analysis of the findings of the past studies with those of 5 follow-up cases studies from 4 industries (wine production, tourism, electrical accessories manufacturing, and government). The following elements were identified as major contributors to successful training practices: (1) having an organizational culture that supports learning; (2) sourcing formal training within the organization itself; (3) adopting accredited training; (4) decentralizing training within the organization; (5) increasing the diversity of training and learning approaches; (6) responding to individuals' needs; (7) increasing the use of informal training; (8) responding to change within and external to the organization; (9) linking training to major features of a business strategy; and (10) obtaining feedback from workers, managers, trainers, customers, and other stakeholders. The follow-up case studies supported these elements and established that items 1, 8, and 9 are the most important. (Ten tables and a glossary are included. The bibliography lists 51 references. The initial and follow-up case studies are appended). (MN)

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Susan Dawe

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Executive summary

Purpose of the research

The major purpose of this study was to examine the determinants of successful training practices in large Australian firms and the factors that have influenced these practices in recent times.

Collection of information

The study was conducted in three phases. Phase 1 comprised a review of the existing literature on training and learning in the workplace, the factors which influence enterprise training, the development of a training or learning culture, and how the success of training is measured.

Phase 2 comprised a meta-analysis of case studies that had already been conducted for previous studies by other researchers. Fourteen industry sectors were included in 49 case studies of large Australian firms (those employing 100 or more employees) from recent publications. These firms included 18 firms from the 14 industry sectors examined in the last two years and 31 firms from five industry sectors examined in the mid-1990s.

The analysis focussed on the impact of globalisation, the use of accredited training, demographic changes, new technology and changes in industrial relations which may have influenced the integration and development of training and learning practices in these firms. Other relevant factors, for example, the development of career structures within the firms, the recruitment of existing skills as opposed to developing skill sets within these firms and the evaluation of their training, were also investigated.

Phase 3 comprised an update of these findings by comparison with five follow-up case studies from four industries which included wine production (Southcorp) and packaging (BRL Hardy), tourism (BridgeClimb™), electrical accessories manufacturing (Clipsal™) and government (Commonwealth Scientific and Industrial Research Organisation [CSIRO]).

What are successful training practices?

Success in any activity can be thought of in terms of the extent to which an activity achieves its desired objectives. In this respect successful training practices are strategies which provide tangible and intangible benefits for organisations (for example, increased skills and knowledge, required corporate values and attitudes, increased competitiveness, improved employee morale, and more effective employee–manager relations). This study focussed on training and learning strategies which had demonstrated benefits to firms over a period of time.

Key findings

The further analysis of the 49 case studies identified ten major elements which contributed to successful training practices. The follow-up case studies also supported these findings. The three most important elements included:

- having in place an organisational culture which supports learning
- linking training to the major features of a business strategy
- responding to change within the organisation or external to it.

An organisational culture in which there was respect for all individuals, a willingness to share knowledge and expertise was essential to successful training and learning. 'Open communication' and, in particular, cross-functional team consultations, also stimulated learning which led to innovative solutions.

Individual development was also encouraged through supportive human resource practices, such as providing training and learning opportunities for all workers, promotion opportunities within the organisation and individual performance feedback.

The linking of training to the business strategies, by conducting training needs analysis for the skills required to implement these strategies, also ensured its relevance to individuals and corporate objectives. Current enterprise training focussed on maintaining a competitive advantage through increasing efficiency in production, developing innovative solutions, products or services, and exceeding customer expectations.

Responding to workplace change was another major element behind training which achieved its desired objectives. Whether the stimulus for change was new technology, new management, new government legislation or new competition, it remained the major driver of enterprise training. When training was related to current work practices, it became more relevant to individual workers and this increased their motivation to learn. In addition, training was often part of the change-management process.

Other elements that contributed to successful training practices include increasing diversity of training and learning approaches used in large firms. Formal training was sourced from within the organisation itself or imported from a range of external training providers. Firms tend to work closely with the external providers to develop the courses and learning materials to meet their workers' needs. Often the training providers delivered the training in the workplace or provided facilitators on site to support employees' learning. Other firms preferred to have their own staff qualified as workplace trainers and assessors and be registered as training organisations in their own right.

Large firms were increasingly providing training towards externally recognised qualifications in order to attract and retain high-quality staff. Using the industry-specific competency standards contained in training packages had assisted firms to implement training towards national industry qualifications for their workers.

Current business practice was market-driven and so these firms believed that listening to their customers was paramount and stimulated creativity and innovation in the firm. Informal training also occurred in functional and cross-functional team meetings and project-based activities. Self-managing teams were common practice in large firms and this had increased the importance of learning within the team and from both mentors in the workplace and professional or business networks.

Although 'training co-ordinators' were responsible for developing the firm's training plan, in general, training delivery was decentralised within large firms. Supervisors were increasingly taking on the role of workplace trainers and coaches for their teams.

Increasingly, individuals had been able to help to identify their own particular training needs through the completion of individual training and development plans. While team-building, computer skills, workplace safety and quality training were generally required to implement the firm's business strategies, other training for multi-skilling and personal development undertaken by employees were influenced by the individual's career goals and interests.

Another indication of successful training practices in large firms was the formal evaluation of training. In the main, training co-ordinators sought verbal feedback from employees and line managers or collected information from formal feedback sheets to evaluate the effectiveness of training. In other firms, surveys of customers and/or staff members were regularly conducted to measure satisfaction with staff training. In reviewing training, firms were able to modify training and increase learning to ensure that the needs of the employees and the company were met.

Increasingly, large firms had established a performance management system where, at half-yearly or yearly intervals, formal appraisals of individuals' performance were conducted by line managers and individual training plans were modified or developed.

Only one firm in this study had a return on investment in training evaluation model in which the value of training to the company's profitability was identified. This model required a range of measures to be developed which linked directly to the cost of specific training. The lack of this type of evaluation of training in most firms was considered to be related to accounting systems where training costs were treated as an inseparable part of labour costs and not as an investment from which a return was expected.

Conclusions

This study of large Australian firms found that ten elements were fundamental for best practice in enterprise training and learning practices. Three elements, in particular, are the most important factors in contributing to successful training practices. These are to have in place:

- an organisational culture that supports learning
- mechanisms to link training to the business strategy
- mechanisms to link training to workplace change.

The other elements contributing to successful training practices relate to the customisation of training for enterprises and individual workers and include:

- increasing the diversity of training and learning approaches
- sourcing formal training from within the organisation itself
- adopting accredited training, often linked to the National Training Framework
- increasing the use of informal training
- decentralising the training within the organisation
- responding to the needs of the individual
- evaluating the training.

Introduction

Aim

The aim of this study was to identify determinants of successful training practices in large Australian firms. Success in any activity can be thought of in terms of the extent to which an activity achieves its desired objectives. In this respect successful training practices are strategies which provide tangible and intangible benefits for organisations (for example, increased skills and knowledge, required corporate values and attitudes, increased competitiveness, improved employee morale, and more effective employee-manager relations). The study primarily focussed on the integration of teaching and learning within the firm, factors which influence firms to recruit existing skills as opposed to developing skills sets within the firm, the use of accredited training and training packages, the development of career structures within firms, the impact of globalisation on training and learning practices, and returns on their investments in training.

Background

Previous Australian research has shown that while training practices vary considerably between industry sectors and individual firms, more formalised training and learning practices are likely to be found in larger organisations.

Smith (2000) compared the data from three surveys undertaken by the Australian Bureau of Statistics (ABS). Findings from the 1996 employer training expenditure survey (ABS 1997) indicated that 88.3% of large enterprises (that is, those employing 100 or more employees) provided structured training for employees. By comparison just 13.4% of small enterprises (that is, those employing less than 20 employees) provided structured training. Findings from the employer training practices survey, indicated that 99% of large enterprises and 57% of small enterprises provided structured training for their employees (ABS 1998a). However, the survey of education and training experience found that 80.2% of workers reported some form of training. In the main this comprised on-the-job training (ABS 1998b).

In a study of 42 firms in a variety of industries, Smith et al. (1995) found that the major drivers of training in organisations were 'workplace change and innovation'. For some organisations the need to provide quality assurance and adapt to new technology was also very important. The development of a training culture within the organisation was found to be dependent on a number of factors. These included management attitude to training, investment in training as part of the business strategy, and management–employee relationships (Smith 1997).

More recent studies of training practices in organisations (Kearns & Papadopoulos 2000; Figgis et al. 2001; Johnston & Hawke 2002; Dawe 2002) also highlighted the importance of change and innovation as major factors driving workplace training.

Methodology

This study aimed to investigate the determinants of successful training and learning practices and the factors that have influenced these practices in large Australian firms in recent times. The methodology for the study included three major phases. Phase 1 comprised a review of the existing literature on training and learning in the workplace, the factors which influence enterprise training, the development of a training or learning culture, and how the success of training is measured.

Phase 2 of the study comprised a meta-analysis of case studies that had already been conducted in large Australian firms. Forty-nine case studies of large Australian firms (those employing 100 or more employees) from recent publications by Smith et al. (1995), Noble, Smith and Gonczi (1996), Figgis et al. (2001), Johnston and Hawke (2002) and Dawe (2002) were included in the phase 2 analysis. The industry sectors covered by the selected case studies are shown in table 1.

Table 1: Industry sectors included in the analysis of initial case studies

Reference	Industry sector (number of case studies)
Smith et al. volume 2 (1995)	Building & construction (7)
Smith et al. volume 3 (1995)	Electronic equipment manufacturing (6)
Smith et al. volume 4 (1995)	Food or beverage processing (10)
Noble, Smith & Gonczi (1996)	Finance & insurance (5) Retail (3)
Figgis et al. (2001)	Food processing (2) Metal engineering (1) Local government (1)
Dawe (2002)	Retail (1) Hospitality (1) Entertainment (1) Community services—aged care (1) Information & communication technologies industry (1) Civil construction (1) Agriculture & food processing (1) Blood & blood products (1)
Johnston & Hawke (2002)	Local government (1) Wine production (1) Community services—nursing (1) Information & communication technologies industry (1) Pharmaceutical manufacturing & packaging (1) Agriculture & food processing (1)

The large Australian firms included in the phase 2 analysis are listed in table 2. For more information on these firms see appendix 1.

The analysis focussed on the impact of globalisation, the use of accredited training and training packages, demographic changes, new technology and changes in industrial relations which may have influenced the integration and development of training and learning practices in these firms. Other relevant factors, for example, the development of career structures within the firms, the recruitment of existing skills as opposed to developing skill sets within these firms, reward and recognition systems for employees and the evaluation of their training, were also investigated.

Phase 3 of the study comprised an update of the findings from phase 2 by undertaking follow-up case studies in different industries. In particular, these follow-up studies assisted with information on the impact of globalisation on the provision of training within large Australian firms.

Table 2: Large Australian firms included in the meta-analysis by industry sector

Industry sector	Firms
Finance & insurance	NRMA National Mutual Financial Sedgwick Limited St George Bank Westpac
Retail	Myer Grace Brothers Newmans Motor Group Woolworths Coles Supermarkets (SA)
Food or beverage processing	Brownes Dairy Murray Goulburn Co-operative Company Ltd Foodco 1 Foodco 2 The Uncle Tobys Company Ltd Golden Circle Don Smallgoods Smiths Snackfood Company Shepparton Preserving Company (SPC) Sunicrust Bakeries Harvey Beef Simplot Kelso Banrock Wine & Wetland (BRL Hardy)
Agriculture & food processing	Barrter Enterprises Australian Agriculture Company
Building & construction	Barclay Mowlem Ltd Civil & Civic (Sydney Olympic Construction Site) John Holland Construction & Engineering—Building Division AV Jennings Homebuild 1 Homebuild 2 Walker Civil Engineering Thiess
Electronic equipment manufacturing	Electrico 1 Osborne Computers Siemens Australasia Electrico 3 Matsushita Electric Co Mitec Ltd
Metal engineering	Stelform Engineering
Information & communication technologies industry	Novell Aspect Computing Pty Ltd (SA)
Pharmaceutical manufacturing/packaging	AstraZeneca Australia
Blood & blood products	Australian Red Cross Blood Service
Community services—aged care/nursing	Baptist Community Services—NSW & ACT (aged care) Royal District Nursing Services
Entertainment	Sydney Opera House Trust
Hospitality	Accor Australia & New Zealand
Local government	South Sydney Council Unley City Council

Four large Australian firms and one large government organisation were selected for the follow-up case studies. These firms are listed in table 3.

Table 3: **Large Australian firms selected for follow-up case studies by industry sector**

Industry	Firm
Wine industry	Lindemans Karadoc Winery (Southcorp Wines) Reynella Packaging Department of BRL Hardy
Electrical accessories manufacturing	Gerard Industries Pty Ltd (Clipsal brand)
Tourism	BridgeClimb™
Government	Commonwealth Scientific & Industrial Research Organisation (CSIRO)

The information was gathered through in-person and telephone interviews with managers, human resource personnel, training co-ordinators and workplace trainers and assessors.

Organisation of the report

The remainder of the report comprises chapters which deal with a review of the literature, descriptions of the major findings from the initial case studies and current practice with conclusions for industry and the VET sector. There is a summary of the firms whose case studies were further analysed for this study, with references to the original case studies, in appendix 1. The follow-up case studies of current practice are fully documented in appendix 2.

Training and learning in the workplace: A review of the literature

Overview

Although the topic for this research study is the determinants of successful training practices in large Australian firms, the first three sections of the literature review examine the broad trends in training and learning in the workplace. The final section briefly covers the literature on measuring the success of enterprise training.

The first section on training and learning in the workplace considers the extent of workplace training, the diversity of training arrangements, factors which determine the type of training, and changes in the workplace that are having an impact on the type of training provided. In the second section the difference between training and learning, the establishment of an enterprise training culture which encourages skill development and the current trend towards learning cultures in enterprises to promote innovation and lifelong learning, are discussed. With these trends, the literature on research into learning in the workplace is also relevant to this discussion and is covered in the third section.

The fourth section of the review addresses the key question: how do firms measure the success of their training practices? The literature appears to have little information on how success is measured in enterprises as formal evaluation of training is not generally undertaken and the training is accompanied by other organisational changes. However, recent Australian research has looked at returns on investment in training.

Training and learning in the workplace

The extent of workplace training

The Australian Bureau of Statistics (ABS) 1997 survey of education and training survey revealed that 80% of wage and salary earners undertook some form of training in the twelve-month period prior to this survey (ABS 1998b). In addition, 33% of the respondents who undertook training, undertook structured, in-house training, and by far the most commonly reported form of training (72%) was unstructured, on-the-job training (Ridoutt et al. 2002). Hence, a significant amount of training is undertaken each year in Australian firms. However, measuring the training activity in Australian firms can be difficult because much of the training is independent of the formal vocational education and training (VET) system. Thus, estimates based on enrolments in formal training activities are likely to reveal only the tip of the iceberg in relation to total enterprise training effort.

The diversity of training arrangements

Enterprises may provide training for employees and support the training initiated by individual employees through various schemes, such as study leave or fee reimbursement. Within enterprises, particularly in large firms, there is a diversity of arrangements in terms of the dimensions of training activity—formal versus informal, external versus internal, on-the-job versus off-the-job, technical versus generic. In addition, each industry sector has identified 'essential skills' that form the core or compulsory units of competency in the national industry training packages.

Formal or structured training

Formal training indicates that the training content has been predetermined by an instructor, or follows a curriculum or training package, and is monitored and recorded by the training provider or educational institution. Formal training in vocational education and training is the same as structured training which is described by the Australian Bureau of Statistics as:

> ... all training activities which have a predetermined plan and format designed to develop employment related-skills and competencies. It consists of periods of instruction, or a combination of instruction and monitored practical work. The instruction can take the form of workshops, lectures, tutorials, training seminars, audio visual presentations, demonstration sessions or monitored self-paced training packages. It can also include structured on-the-job training. (ABS 1998b, p.65)

Informal or unstructured training

In contrast to formal training, informal, or non-formal, training activities are instigated by the individual or occur in an ad hoc fashion (as the need arises or depending on the circumstances). Thus, informal training in VET is the same as unstructured training described by the ABS as 'training activity that does not have a specified content or predetermined plan. It includes unplanned training that is provided as the need arises and training activity that is not monitored such as self-training through reading manuals or using self-training computer packages'. (ABS 1998b, p.66)

As we shall see later in this chapter, the broader concept of the learning process by which a recipient gains new skills and understanding includes non-training learning. Because it can be initiated by the individual or a group with a shared interest or concern, non-training learning may also be called informal learning, incidental learning, experiential or team learning. Collaborative or group learning, which finds innovative solutions to problems, may often be attributed to non-training learning in team-based organisations.

External training

Training content which is provided by an external training provider, curriculum or training package and externally monitored and recorded is referred to as external training. Employers may choose to pay an external training provider for formal, structured training of their employees, for example for trade apprentices and trainees. In addition, employees or individuals who pay for their own formal training will choose an external training provider, such as a technical and further education (TAFE) institute, private college or university, and their training assessment is recorded by that external institution.

Internal training

Where the training content is developed internally by staff or training specialists to meet enterprise and employees needs, and the training does not conform to any external accreditation process, then the training is called 'internal', that is, enterprise-provided training. Such training may be delivered using the enterprise's own staff with appropriate expertise or training consultants from outside the organisation.

Similarly, informal (unstructured) training activities can be undertaken by an individual within the enterprise, or external to it, as illustrated in table 4.

Table 4: Four dimensions of training – formal, informal, external and internal

	Formal (structured) training	Informal (unstructured) training
External	Training content provided by an external training provider, curriculum or training package and externally monitored and recorded. Instructor-led whether delivered on-campus, at the workplace or self-paced.	Informal or non-formal training is instigated by the individual or occurs on an ad hoc basis (as the need arises or depending on the circumstances). External informal training may come from other students, lecturers, family members or other social contacts or from self-study.
Internal	Instructor-led program with training content developed wholly or partly internally within the enterprise by staff, and monitored and recorded within the enterprise only.	Informal internal training, while instigated by the individual or occurring on an ad hoc basis, may come from observing colleagues, asking questions, teaching yourself, reading instruction books or other self-study at work.

Formal training activities paid for by the employer are often conducted at the workplace and variously described as internal, in-service, on-site, in-house, on-the-job, enterprise, work-based or workplace training activities. In-service training generally implies professional development of staff, often sponsored by the employer, and usually provided during normal working hours. On-site training generally means the same as workplace training since training is conducted at the work site (for example, in a training room but not on the job) and is particularly used when the work site/project changes (as is the case for building and construction workers). In-house training can include both internal training, where the training content has been developed within the enterprise, and workplace training, where training is delivered at the workplace. Work-based and enterprise training are similar to in-house and workplace training and generally refer to training provided by an organisation primarily for its own employees using the employer's own staff or consultants. Work-based or enterprise training can be conducted either on site or at an off-site location. On- and off-the-job training are two more important dimensions of training, which will now be discussed in more detail.

On-the-job training

Training undertaken in the workplace as part of the productive work of the learner, that is, while carrying out normal work tasks, is described as on-the-job training (for example, working under instruction and supervision of a workplace trainer or experienced colleague).

Off-the-job training

Off-the-job training takes place away from a person's job, that is, it is not part of productive work or normal work tasks. It is normally conducted off the premises but may be on the premises (for example, in a special training room).

Both formal and informal training activities can be undertaken by employees or trainees while on- and off-the-job as illustrated in table 5.

Table 5: Four dimensions of training – on-the-job and off-the-job, formal and informal

	Formal (structured) training	Informal (unstructured) training
On-the-job	Formal training can take place on the job, that is, while a person is undertaking normal work tasks or as part of productive work, under instruction and supervision of an experienced colleague or workplace trainer.	Informal on-the-job training is undertaken as part of productive work and instigated by the individual or on an ad hoc basis, for example, observing colleagues, asking questions or being coached.
Off-the-job	Off-the-job training takes place away from a person's job, usually off the premises but may be on the premises. Formal training can be undertaken off the job, that is, instructor-led training sessions in a worksite training room or at external training provider locations e.g. TAFE.	Informal training can be undertaken off the job, that is, away from a person's job, or while not carrying out the normal work tasks, and is instigated by the individual or on an ad hoc basis, for example, asking questions or listening to friends, family members, union organisers and other contacts.

It should be noted that the interpretation of the term 'on-the-job' in the literature needs caution because it can be used in broader or narrower contexts in different circumstances. For example, the ABS uses a narrow definition of on-the-job training in the survey of education and training experience in which they exclude any structured training (in-house or external) or study for an educational qualification. Formal, structured training may involve instruction off the job (but still in-house) for some sessions and then follow-up activities on the job. While informal, unstructured training is generally thought to occur on the job, it also takes place between colleagues in the car park or during work breaks such as lunch time or union meetings, which may be considered off the job rather than strictly on the job.

Finally, this section looks at technical and generic skills training. The technical skills are those specific to working in that industry sector such as welding (metal and engineering industry) or food waiting (hospitality industry). The generic skills are those skills which can apply to work generally or can transfer to different jobs or industries, such as problem-solving and communication skills.

Traditionally in Australia, the technical skills for trades and crafts have been taught off the job to apprentices by external training providers, such as TAFE colleges. However, the skills for manufacturing processes or enterprise-specific processes have tended to be taught to new workers on the job by the leading hand or line manager.

In general, most enterprises tend to have the technical expertise in-house and experienced staff are able to train or mentor new employees on the job in the technical skills for their job. When new technical skills are required, for example for new technology or techniques, selected staff may be trained externally and then they pass these skills on to others within the enterprise or the vendors of the new equipment may provide training for their customers. Alternatively, in emerging industries, or in small enterprises, such as in the information communications technology industry, there is a trend to acquire additional skills when needed through specific recruitment or the use of specific contractors.

In addition, each industry sector has identified its 'essential skills' which have been included in the national industry training packages as the core or compulsory units of competency. These essential skills or competencies include generic skills such as communication in the workplace, and, in some industry sectors, basic technical skills or the use of everyday equipment such as telephones, computers or hand tools. Both technical and generic skills are required by industry as compulsory competencies for entry-level qualifications and for higher levels of the Australian Qualifications Framework as illustrated in table 6.

Table 6: Units of competency in national industry training packages

Units of competency	Generic	Technical
Compulsory (core)	Compulsory units of competency considered essential for working in general, but tailored towards the industry sector e.g. communication in the workplace, working with others, following health, safety and security procedures, customer service, planning daily work routines.	Compulsory technical units of competency which are considered essential to working in the industry sector or stream e.g. handling tools or equipment, hygiene in food handling, industry knowledge. Core units are required at entry-level i.e. certificate I or II, and may be required at higher AQF levels for specific streams.
Elective (optional)	Units of competency which are general skills may be offered within the industry training package, or from another industry training package, and are optional depending on the stream or AQF level e.g. negotiation, conflict resolution or report writing.	Optional units of competency which contain specific technical knowledge according to industry sector and stream e.g. metal fabrication, accounting or human resource management

Dawe (2002) studied training packages and enterprise training in ten industry sectors. Three generic competencies were found to be compulsory in all industry sectors: working with others, communicating in the workplace, and following health, safety and security procedures. Customer service, professional behaviour, grooming and work ethics, planning daily work routines, and developing or updating industry knowledge were also compulsory competencies for a majority of the industry sectors.

Dawe (2002) also reported that the findings from the case studies indicated that employers' recruitment and selection processes were heavily focussed on acquiring staff or trainees with appropriate generic skills and attributes, especially 'people skills' which included communication, teamwork and a client focus. The major personal attributes sought were appropriate values and attitudes.

There is a growing trend for supervisors and managers to require more generic skills, such as communication, negotiation, presentation, strategic planning, conflict resolution, report-writing and training skills. Enterprises often use external providers or consultants for training supervisors and managers in generic skills. Dawe (2002) also noted that there is a trend to use trained workplace mentors to increase the motivation of technical specialists (for example, information technology professionals) to learn generic skills, such as presentation and negotiation skills, while working with clients.

The extent of structured and unstructured training

The Australian Bureau of Statistics surveys of education and training experience provide a more complete measure of enterprise training activity than enrolments in formal VET activities. One such survey was undertaken in 1997 (ABS 1998b) and, in the twelve-month period prior to this survey, 80% of wage and salary earners undertook some form of training. The findings from this survey indicated that, of those respondents who undertook training, 20% undertook structured, external training and 33% structured, in-house training. However, by far the most commonly reported form of training (72%) was unstructured, on-the-job training (Ridoutt et al. 2002). For this survey, the Australian Bureau of Statistics defined on-the-job training narrowly as a workplace training activity aimed at improving job skills while working in a job, and excluded any structured training (in-house or external) or study for an educational qualification. Workplace training activities can include asking questions of co-workers and colleagues, teaching yourself, being shown how to do your job, watching others work and other activities.

The Australian Bureau of Statistics business longitudinal survey collects data from firms with less than 200 employees and so large firms are under-represented. The business longitudinal survey gathers data primarily on business and financial performance of enterprises but also includes some basic questions on training provision. In 1997–1998 the business longitudinal survey indicated that 54% of enterprises provided training to their employees and 23% provided structured training (ABS 1999). Estimates of the number of employees receiving training from their employers in the period of the survey suggest that 68% received unstructured, on-the-job training while 46% received structured training (Smith 2000). These figures are broadly in line with those of the survey of education and training for on-the-job training.

In large Australian firms more variety and choices of training are possible. Figgis et al. (2001) noted that where the enterprise was large enough to have an in-house expert in training and learning, this individual had the skills to identify external providers and appropriate structured, formal training or could negotiate unstructured or informal on-the-job training using in-house experts. However, most small and medium-sized firms do not have such training expertise available to them.

With the increased availability of flexible delivery of training, even more options and choices are available to Australian enterprises and individuals. For example, it is possible to undertake structured training via the computer either at work or at home, online or from disk. In some industries, such as in information and communication technologies, using the internet is already an important method to enable individuals to keep skills and knowledge up to date. Attending professional associations and vendor seminars is also an important way for individuals to maintain currency in the information and communication technologies industry and other industries. While these options are mostly informal, unstructured training for individuals, many information and communication technologies companies, industry and professional associations also run structured training seminars.

More structured training in large firms

The previous Australian research (Gibb 1998; Smith 2000; Figgis et al. 2001) has shown that while training practices vary considerably between industry sectors and individual firms, more formal, structured training practices are more likely to be found in larger firms than in small to medium-sized firms. As noted by Smith (2000), findings from the Australian Bureau of Statistics 1996 employer training expenditure survey indicated that 88% of large enterprises (that is, those employing 100 or more employees) provided structured training for employees (ABS 1997). By comparison just 13% of small enterprises (that is, those employing less than 20 employees) provided structured training.

Findings from the 1997 employer training practices survey indicated that 99% of large enterprises and 57% of small enterprises provided training for their employees (ABS 1998b). As with training expenditure in the training expenditure survey, the incidence of enterprise training in the training practices survey varies considerably with employer size. The provision of structured training in the training practices survey follows the same pattern as in the training expenditure survey, with 93% of large firms providing structured training compared to 30% of small enterprises. The findings for structured training from the training expenditure survey are compared to those from the training practices survey in table 7.

Table 7: Structured training provided in small and large firms

	Small	Large
1996 Training Expenditure Survey	13%	88%
1997 Training Practices Survey	30%	93%

Source: ABS 1997, 1998b

The ABS used a common sample for these two surveys and this allows data to be linked. In both of these surveys the definition of structured training allows for the inclusion of on-the-job training. However, in the training expenditure survey, on-the-job training is restricted to training 'associated with the assessment of accredited competency-based skills'. This definition may account for the lower incidence of structured training reported in the training expenditure survey compared with the training practices survey. Data are also collected on training activity for the previous three months in the training expenditure survey compared to the full year for the training practices survey. Thus, the training practices survey appears to be a more accurate measure of the structured training provided within enterprises (Smith 2000).

The view that large firms invariably train more than small or medium-sized firms relates mostly to the extent of structured training. In contrast, Ridoutt and colleagues (2002) analysed further the relationship between employer size and the volume of training in two industries, that is, manufacturing and entertainment, and did not find a pronounced difference by size. They used two measures of training effort, that is, firstly, the proportion of employees involved in training, both formal and informal, in the previous year, and secondly, the percentage of payroll spent on training. However, these researchers found that employer size did influence the nature of the enterprise training. Small enterprises, like individual worksites that are part of larger, corporate structures, demand different types of training.

Factors which influence the type of training

If enterprises are to have successful training practices, they need to be aware of all the factors which influence the type of training provided.

In Australia, Smith and Hayton have investigated the determinants of enterprise training (Smith & Hayton 1999). Over a two-year period from 1994 to 1996, a research team from Charles Sturt University and the University of Technology, Sydney, studied 42 organisations in depth and carried out a survey of 1750 studies of private sector organisations. Organisations in five industry sectors were studied, including building and construction, food processing, electronics manufacturing, retailing and finance and banking

The research identified three key 'drivers' of enterprise training. The drivers were:

- *Workplace change:* this includes the introduction of teamwork, new management practices and new forms of work organisation. The extent and pace of workplace change varied between enterprises and industries.
- *Quality assurance:* quality improvement was a particular form of workplace change that emerged as a consistent driver of enterprise training. However, the interpretation differed significantly across industries.
- *New technology:* this included new product and process technology.

In addition, Smith and Hayton identified six training 'moderators' which operate at the organisational level. These were:

- enterprise size
- industry traditions of training
- occupational structure
- industrial relations
- management attitudes
- government training policy (Smith & Hayton 2000, p.59).

The 'drivers' and 'moderators' interact to produce the enterprise's final training arrangements. Unique interactions occur within each enterprise and thus produce a diversity of arrangements in terms of the dimensions of training (Smith 2000, p. 59).

Similar findings were noted by Smith in the training practices survey which asked enterprises to rank factors that caused them to train their employees as well as the factors that caused an increase in training expenditure. For enterprises providing structured training in 1996, the five most important reasons for provision of training were:

- improve performance in the current job (38%)
- improve quality of goods or services (37%)
- respond to new technology (22%)
- develop a more flexible workforce (16%)
- improve employee safety in the workplace (15%) (Smith 2000, p.59)

For enterprises reporting an increase in their provision of structured training in the last 12 months, the five major factors driving the increase were:

- technological change (32%)
- changes in management practices (25%)

- quality assurance or quality control (21%)
- regulation or awards (18%)
- availability of external training providers (16%) (Smith 2000, p.59).

Comparing these training practices survey-derived 'drivers' to those of Smith and Hayton (2000), 'improving quality' and 'responding to new technology' appear explicitly in both numbered lists and correspond to two of three key 'drivers' on Smith and Hayton's list. The third key 'driver' was 'workplace change', which can be considered to incorporate five other training practices survey-derived factors, that is, 'changes in management practices', 'regulations or awards', 'develop a more flexible workforce', 'improve employee safety in the workplace' and to improve employee 'performance in the current job'. Thus, training practices survey-derived factors support the Smith and Hayton model of three key 'drivers' of workplace training, that is:

- workplace change
- quality assurance
- new technology.

In addition, a recent study commissioned by the Australian Industry Group examined the future skills and training needs of the manufacturing industry (Allen Consulting Group 1999). The study covered a representative sample of the 11 500 enterprises who are members of the Australian Industry Group. It included a survey of a sample of member enterprises, interviews in over 50 enterprises and focus groups with enterprise members. The Australian Industry Group study examined the reasons that members trained their employees. Their reasons for training included:

- improve quality (94% agreed)
- improve our competitiveness (88% agreed)
- multi-skill our employees (97% agreed)
- meet health and safety requirements (77% agreed)
- implement workplace change (69% agreed)
- build commitment to the company (67% agreed) (Smith 2000, p.61).

Comparing the Australian Industry Group-derived 'reasons for training' to the 'drivers' of training of Smith and Hayton (1999), 'improve quality' is ranked first and 'implement workplace change' is ranked fifth and these correspond to two of three key 'drivers' on Smith and Hayton's list. In addition, the other reasons which ranked second and third, that is, 'improve our competitiveness' and 'multi-skill our employees', can be grouped under 'workplace change', thus confirming that 'workplace change' and 'quality assurance' are the two major factors driving the training efforts of the Australian Industry Group enterprises. The third key driver 'new technology' does not appear in the Australian Industry Group-derived list but could also be grouped with 'workplace change'.

Changes in the workplace and the type of training provided

Following the work on drivers of enterprise training, Smith and his colleagues investigated the links between the form of organisational change which was implemented by management and the enterprise training provided to employees (Smith et al. 2002). This research involved a survey of 3500 businesses. Five forms of organisational change were investigated, including teamworking, total quality management, lean production, learning organisation and business process re-engineering. This research appears to confirm the importance of workplace change, including managing for quality assurance, in stimulating industry training. However, it is clear that the form of change adopted can have a significant impact on the type of training that occurs and who receives it.

Teamworking

The research examined both the extent of teamworking adopted in enterprises and the degree of autonomy given to teams. Sixty-three per cent of responding enterprises reported that they used teamworking. The adoption of teamworking resulted in a greater decentralisation of the training function, a higher level of workplace delivery of training and a more even distribution of training. The incidence of high team autonomy was relatively uncommon but was associated with a greater use of external training provision and a greater formalisation of training.

Total quality management (TQM)

Of the enterprises responding to the survey, 44% reported a high level of commitment to some form of total quality management. This was also associated with a greater level of decentralisation of training responsibility and a focus on generic skills. Total quality management was also associated with a greater use of internal training resources and provision of nationally-accredited training.

Lean production

Forty-five per cent of responding enterprises reported a high commitment to lean production techniques. This was associated with a reduction in training due to cost-cutting measures, a more informal approach to training and less likelihood of a training specialist existing in the enterprise.

Learning organisation

In this survey 40% of respondents reported a high commitment to the principles of the learning organisation. This was associated with a greater level of decentralisation of training, greater attention to the training of managers, a focus on generic skills in training and a greater use of coaching and mentoring.

Business process re-engineering

Twenty-eight per cent of responding enterprises reported a high level of commitment to business process re-engineering. This resulted in a greater use of accredited training, a higher degree of workplace delivery of training and a more even distribution of training for different groups of employees.

Other important developments impacting on workplace training

Five other developments also impact on enterprise training:

Casualisation of the workforce

One important development impacting on enterprise training activity has been the growth in the numbers of casual workers in Australian enterprises. The ABS has defined casual workers as workers who do not enjoy employment benefits such as paid leave and sick leave and whose degree of attachment is thus lower than a permanent employee.

VandenHeuvel and Wooden (1999) have shown that the proportion of casual workers grew from 15.8% of the workforce in 1984 to almost 27% in 1998. These researchers examined the experience of training for both casual and permanent employees. They gathered data on the incidence of in-house training, external training undertaken with employer support (employer pays for training) and external training unsupported by the employer (employee pays for training). The data showed that casual employees are significantly disadvantaged in terms of employer-sponsored training whether it is provided in house (received by 16.7% of casual employees compared with 40.5% of permanent employees) or from external providers (3.4% of casual employees compared with 15.3% of permanent employees).

However, casual workers appear to undertake a significant amount of external training at their own initiative and expense. Thus, they are investing in their own training and development. This supports the notion that workers are becoming more responsible for their own training and development and the recognition of a trend towards lifelong learning in Australia.

Outsourcing work

Another important development impacting on enterprise training activity has been the increasing incidence of outsourcing in Australian enterprises. Although the degree of outsourcing in the Australian economy is difficult to estimate, VandenHeuvel and Wooden (1999) estimate that between 4% and 10% of the workforce may be employed as contractors to other organisations. However, they caution that this figure may well underestimate the extent of outsourcing, as many self-employed workers would not classify themselves as contractors.

In addition, employees of labour hire firms may view themselves as permanently employed although they are involved in the contracting business. A survey of labour hire firms conducted by KPMG Management Consulting (1998) in Australia showed that the major reason for the use of outsourcing was to meet peak periods of demand for the enterprise. In many cases this involved the use of highly skilled labour (for maintenance and other tasks). The expectation appeared to be that employees were recruited for their existing skills and were expected to maintain those skills at their own expense and in their own time.

Outsourced workers depend on their skills for their employment and are increasingly undertaking training at their own expense to maintain and increase their skills. Smith (2000) concludes that this supports a trend to individualisation of industry training and a changing role for the enterprise as a broker rather than a provider of training.

Skill shortages

The demographic change in the Australian population means that employers are competing for a decreasing number of young workers and this has highlighted the importance of re-training the existing workers (Smith & Hayton 1999).

Dawe (2002) found that the industry training packages with recognition for current competencies (RCC) were particularly useful to encourage existing workers to continue learning. The aged care industry, in particular, has focussed on re-training existing workers and mature-aged workers as few young people were entering the industry.

In addition, Kearns and Papadopoulos (2000) found that the 'exponential pace of change' which produced skill shortages in more dynamic industries in the developed countries, was a particular influence driving policy towards strategies for lifelong learning and building a learning culture.

Business strategic planning

A key finding in the research by Smith and colleagues is that the development of a formal business strategy is the most importance factor in boosting the incidence of training (Smith et al. 2002).

Similarly, of all the measures contained in the ABS business longitudinal survey data, the existence of a formal business or strategic plan is the one most strongly associated with a higher incidence of enterprise training (ABS 1999). Analysis undertaken by Smith of the survey indicates that, across a range of measures, the incidence of training is far higher in businesses that have adopted a formal strategic or business plan than in those businesses that have no business plan (Smith 2000). Eighty-six per cent of enterprises with a business plan provided on-the-job training compared with 58% of enterprises without a plan. Of those enterprises with a business plan, 67% provided structured training compared with only 34% of enterprises without a plan.

The Australian Industry Group study also confirmed the link between training and business strategy in the plans of the enterprises in the survey. Seventy-one per cent of the surveyed enterprises saw a strong link between their decision to train and their 'competitive edge' (Allen Consulting Group 1999). Of the enterprises responding to the survey, 61% expected that the skills and capabilities within their businesses would make them attractive to investors.

Slightly different findings were reported by Ridoutt and colleagues (2002) who investigated further the relationship between the formal business plan and training activity in two industries that is, manufacturing and entertainment. They found the existence of business plans was widespread (81% of enterprises) in the two industries studied, and that training was mentioned in most (71%) business plans. In addition, almost half (47%) of the surveyed worksites had involved 50% or less of their employees in some form of training in 1999, which is consistent with the findings of Hayton et al. (1996). However, Ridoutt and colleagues did not find a positive relationship between the extent of training effort, that is how much training is being done, and the strategic value of training (represented by training's integration in the business plan). This differed from the findings of Hayton et al. (1996).

The impact of globalisation

According to Hobart, 'globalisation refers to the increasing integration of both firms and economies as international flows of trade, investment and financial capital grow' (Hobart 1999, p.11). Globalisation is not a new phenomenon as in the 19th century where there were plenty of examples of internalisation or globalisation of trade and production (for example, the East Indian Company of Great Britain). However, the new information and communications technologies of the late 20th century have greatly increased the opportunity for markets and production to be managed across national boundaries.

Increased competition impacts on enterprise training

Globalisation means that large and small enterprises may now compete, or are forced to compete, in a global market. In addition, Australian firms may be subject to take-over by multinational companies or they are able to expand into overseas markets, on their own or through mergers or alliances. These particular developments relate to increased competition and increased markets. This extends to the supply of, and demand for, trained workers and training within enterprises.

This increased competition from the global market has put pressure on Australian enterprises to improve in the following eight areas. All of these areas are drivers for enterprise training provision and require individuals and enterprises to continue to learn. The areas for improvement by enterprises include:

- quality of products and services
- efficiency and effectiveness of all processes
- innovation and creativity to find new products and services
- flexibility and customisation of products and services to meet customers needs
- human capital through knowledge and skill development
- knowledge-building
- dissemination of knowledge between employees, partners or subcontractors and clients
- investment in new plant and equipment.

These areas were illustrated in the analysis of the Australian Industry Group members survey, which indicated that more than a quarter of the companies had developed strategies which supported their competitiveness through a range of knowledge-building activities including research and development and the development of their people through training (Allen Consulting Group 1999).

Analysis of the Australian Industry Group members' survey identified a leading set of firms as 'best performers'—those which demonstrated all of the key elements of high performance evident in their strategies as well as in their demonstrated success in the marketplace (Fitzgerald 2001). These companies, which describe themselves as focussing on quality, planning and leadership in a changing marketplace, invest in new plant and equipment and their human capital, and regularly benchmark their performance against others.

The next subset of the Australian Industry Group companies were identified as 'global and competitive companies': those companies which operate in environments in which most of their competitors are from overseas, which export a large proportion of their output and which judge their own businesses to be competitive. Companies in this category tend to be large and identify a strong link between training and innovation and emphasise skills and qualifications training (Allen Consulting Group 1999).

A third subset of the Australian Industry Group companies was identified as research and development companies which stated that they were constantly endeavouring to develop new products and processes and improve the way they conducted their businesses. These companies identified strong reasons to train, including quality, multi-skilling, competitiveness and employee commitment.

Developed countries now require higher levels skills

The report of the Australian Industry Group members survey of their skill needs indicated that, in the manufacturing sector, Australia enterprises are displaying a marked preference for higher levels of skills in both recruitment and in their training. It was argued that this reflects an underlying upward movement in the skills levels associated with the future business plans of these enterprises:

> Most jobs in the Australian Industry Group are expected to move up the skill ladder, reflecting the more sophisticated nature of production and service and the greater level of knowledge embodied in the work taking place among these companies.
>
> (Allen Consulting Group 1999, p.37)

Trends in the changing nature of training

The research also points to a number of broader trends in the changing nature of training as a result of the organisational changes and recent developments affecting the workforce. These trends include an emphasis on generic skills required by enterprises, decentralisation of the responsibility for training of employees to line managers, and individuals taking responsibility for their own training, career planning and lifelong learning.

The growing importance of generic skills training

Smith (2000) noted that enterprises appeared less concerned with training in job-related technical skills but more with training in skills such as problem-solving, working with others and communication. These generic or transferable skills produce a degree of workforce flexibility and adaptability. Dawe (2002) found that the generic 'people skills' were generally more important than technical skills for entry-level recruitment by large firms.

The Australian Industry Group enterprises also emphasised the importance of training for generic skills, citing basic skills such as literacy and numeracy, information technology capability, problem-solving, communication and a willingness to learn, as the essential skills which they demand in new and existing employees (Allen Consulting Group 1998). The Australian Industry Group enterprises were increasingly looking for a range of generic or core skills that would underpin their future business plans.

Decentralisation of training in enterprises

All forms of organisational change adopted appeared to Smith (2000) to be reinforcing a change from the traditional training structures, such as a central training department with training specialist or instructors. In many cases formal training departments had been abolished, responsibility for training had been devolved to line managers and training was delivered by new workplace trainers—employees who had taken on a training role in addition to their other duties. There is also an increasing use of mentors and coaches to support the learning of individuals in the workplace.

The individualisation of industry training

Smith (2000) also noted that enterprises in the research study were moving away from the provision of training at the enterprise level and increasingly towards the notion that the individual employee must take responsibility for his/her own training. The role of the enterprise was to act as a broker in the relationship between individuals and a variety of training providers.

That casual workers and outsourced workers are investing in their own training and development, also supports the notion that training is becoming a more individualised process within Australian enterprises. It also supports the recognition of trend towards lifelong learning among the Australian population.

Training and learning cultures

As already noted, the focus of the current study is to identify the determinants of successful training practices in large Australian firms, but the literature review is covering the broader topic of training and learning undertaken in the workplace. In this section on training and learning cultures, two important questions arise: what is training and how does training differ from learning? These two questions will be answered before moving on to the views of a number of researchers who have studied enterprise cultures in relation to training and learning. Specifically, the Johnston and Hawke (2002) study on how Australian enterprises develop and maintain a learning culture and earlier literature on the similar topic of a 'learning organisation' will be discussed. In addition, Kearns and Papadopoulos (2000) studied the building of a training and learning culture in five Organisation for Economic Co-operation and Development (OECD) countries.

Training and learning

The dictionary definition of training implies instruction and practice in order to gain the skills and knowledge required to become proficient in some activity, whether it be sport or work. In terms of vocational education and training, Burns (1995) noted that training is where the learning environment is predetermined by an instructor and directed at particular outcomes for the learner. In relation to enterprise training, Smith and Smith (1998) argue that training is the 'conscious activity on part of the organisation' to ensure the right type of learning occurs for the right individuals at the right time.

According to the Macquarie Dictionary, learning is 'to acquire knowledge of, or skill in, by study, instruction, or experience'. This broader concept for learning is emphasised by Burns (1995) who noted that learning causes some change in behaviour or thinking, either observed from the actions or attitudes and emotions of individuals or groups. Thus, as noted by Smith and Smith (1998) enterprise training seeks to ensure that appropriate learning takes place within the enterprise and that the learning is goal-directed and structured to support the business strategy of the enterprise.

The broader concept of a learning process by which a recipient gains new skills and understanding, is appropriate for this study. Learning can be intentional or incidental and can be initiated by individuals or groups with a shared interest or concern. Successful learning practices should also be included in this study of successful training practices in large firms, since it is recognised from previous studies that, besides formal training instruction, other less formal, unstructured learning practices are also prevalent for workers today (Gibb 1998; Smith et al. 2002; Dawe 2002).

Less formal learning may involve self-study, and observation of experienced colleagues through working collaboratively in project teams, partnerships, job-sharing, or with mentors and coaches. Networking is an important strategy for individuals to acquire knowledge and skills. Networks may include business, professional or social contacts and interest groups.

A number of trends in the changing nature of enterprise training have already been noted, such as the emphasis on working in teams and continuous improvement in quality and service. Individualised training and learning involves many different learning strategies and the number of workplace trainers, mentors and coaches is growing (Dawe 2002).

Enterprise training and learning cultures

Large enterprises are more than just individuals, they are also collections of people, systems, processes, previous experience and management styles. Often organisations train individuals but fail to consider the team or do not take advantage of the new skills and knowledge of the individual. In addition, teams within large enterprises may not be aware of the consequences of their actions to other parts of the enterprise and thus fail to contribute to further success of the enterprise. The terms 'training culture' and more recently 'learning culture' are used in the literature and have been defined by a number of researchers. In addition, the findings from a number of researchers of enterprise cultures which support skill development and learning to promote teamwork, continuous improvement, innovation and lifelong learning, are discussed here.

Firstly, the traditional 'training culture' was based predominantly on accredited and structured training for the purpose of gaining a qualification. For example, some industries, in particular the trades, have historically had apprenticeship training for entry to the industry, and may require a licence to practise, such as for electricians. In contrast to the trades, other industries have traditionally not required qualifications but 'learning by doing'; for example, labourers in the construction industry or staff in the entertainment industry. These workers obviously learn what to do, or what not to do, from supervisors or experienced colleagues while working on the job. On-the-job training or instruction has generally been considered less formal, and so less important by professional educators, hence the term 'training culture' has mainly reflected an interest in gaining qualifications.

Secondly, a 'learning culture' for the purposes of the recent research study conducted by Johnston and Hawke (2002) was defined as 'the existence of a set of attitudes, values and practices within an organisation which support and encourage a continuing process of learning for the organisation and/or its members'. Pedler, Boydell and Burgoyne (1989) defined a learning culture as a culture where an organisation 'facilitates the learning of all its members and continuously transforms itself'.

It should be noted that motivation and commitment of individuals to learn throughout their lives, on their own, does not make a learning culture. Johnston and Hawke (2002) found that a commitment to learning on the part of the organisation included formal and informal initiatives implemented within the organisations, and behaviours displayed to encourage learners to acquire new skills, adopt new ways of practice, and share knowledge on work and work practices.

Dawe (2002) found that large Australian firms were developing training or learning cultures and were using the national competency standards to upskill employees, maintain quality service and company values, and complement lifelong learning of employees. In addition, competency standards were used to describe jobs and the Australian Qualifications Framework levels were aligned to career structures, which provided a strong incentive for employees to continue learning.

Dawe (2002) also noted that a well-developed enterprise training and learning culture generated enthusiasm and commitment to learning and bound the organisation together. In large organisations the training and learning culture was perceived as a form of communication and considered by senior managers as essential for the transmission of the organisation's mission, values and attitudes to employees.

Gibb (1998), in reviewing the relevance of a training culture for small business in Australia, noted that many people in small business acquire skills and competencies for the job using a number of strategies, not only training. Small business undertook training and learning for the purpose of maintaining and developing its business performance and therefore required a cluster of services which offered advice, information and business development. Thus, the traditional training culture, based predominantly on accredited and structured training for the purpose of gaining a qualification, did not reflect the training and learning that happens in small business.

Thirdly, since learning, like training, was only a tool for achieving the desired outcomes, Figgis and colleagues point out that rather than using either label, the central action should be described, such as 'this enterprise has a culture which amplifies the value of training and learning through its interpersonal relationships' (Figgis et al. 2001, p.iii). These researchers focussed on small- to medium-large-sized enterprises and studied ten enterprises in depth to construct a picture of their culture and the strategies used for skills development. They found a 'broad and dynamic engagement with knowledge and innovation' which was closer to a learning culture than a training culture.

Developing a learning culture

Johnston and Hawke (2002) set out to explore how the concept of a learning culture or a commitment to learning is currently understood by Australian organisations. In so doing the research investigated the approaches and strategies that organisations, which claimed to be developing a learning culture, had used to establish and maintain such a culture in their enterprise.

The general findings from the case analysis by Johnston and Hawke (2002) revealed that organisations understood the concept of a 'learning culture' differently and so there was a variety of ways for building and maintaining a learning culture within an organisation. These researchers found that the development and maintenance of a culture of learning was a response to organisational needs for enhanced production or service provision rather than a specific response to policy initiatives related to skill formation. Organisations embarked on this pathway in response to immediate pressures and implemented approaches and developed systems to best meet their needs. Thus, systems varied considerably.

Some systems introduced to meet a need in an enterprise were educational programs, such as a highly structure learning system, either aligned or non-aligned to the Australian Qualifications Framework. Other systems were more aligned to new ways of working and gave employees opportunities to make decisions collaboratively and to learn from each other, through exposure to work processes and from work performance data or new work structures. These new ways of working created new opportunities for learning.

Hence, the Johnston and Hawke (2002) study suggested that to develop and maintain a learning culture, enterprises should:

- promote more communicative, collaborative environments in which individuals learn from each other and collaborative work endeavours
- introduce new systems, structures and processes which not only enhance production or service provision but also increase learning opportunity
- increase opportunities for employees to contribute to decision-making if not at the policy-making level, at least at work process level about practices in the workplace

- develop systems and structures that support learning; for example, visible documentation about work processes, work roles, formal learning and development programs or performance data provisions and performance review systems
- increase learning opportunities and introduction of new ideas through establishment of partnerships and associations with a range of external stakeholders or other partners.

Learning organisations

Learning organisations are another way of describing learning cultures or a commitment to learning within an organisation. Hence, the literature on learning organisations is relevant here, especially major contributions to the characteristics of a learning organisation, including their values, attitudes and practices, and how to develop a learning organisation.

The Senge (1990) model sets out the five disciplines or essential elements required for a learning organisation. These disciplines include systems thinking, personal mastery, mental models, building a shared vision and team learning. Senge also emphasises that the five disciplines must develop together and it is the 'systems thinking' which integrates all the disciplines.

A variety of other models of learning organisations have been advanced (Pedler, Boydell & Burgoyne 1989; Watkins & Marsick 1993; Marquardt 1996; Denton, 1998). Communication, teamworking and leadership are most important skills for any business (Blandy et al. 2001), but particularly in learning organisations. A free and equal exchange of ideas or opinions between all members of an organisation or 'dialogue' is the central component of the learning organisation model developed by Marquardt (1996). In addition, Watkins and Marsick (1993) maintain that leadership in establishing systems which encourage collaborative and continuous learning, is an essential ingredient to the learning organisation.

These models extend beyond any traditional training system and link closely to the behaviours, attitudes, values and structures operating in organisations.

National training and learning cultures

Training and learning cultures in all Australian firms would ideally be supported by a learning culture at the national level. Kearns and Papadopoulos (2000) studied the building of a learning and training culture in five OECD countries. They found that 'culture' is of growing significance in the knowledge-based new economy. The culture, particularly the values, have a profound influence on the generation of new knowledge and the capability of firms for innovation and adaptation to change. These researchers decided to follow the pragmatic approach adopted by a recent British national advisory group which interpreted culture as:

> ... that bundle of signs, symbols, beliefs, traditions, myths, ways of thinking, speaking and doing which characterise the ways of life or behaviour of a given group of people.
>
> (National Advisory Group for Continuing Education and Lifelong Learning 1997, p.8)

While the countries studied reflected different ways in which the concept of a learning and training cultures could evolve, Kearns and Papadopoulos (2000) found certain general themes. These themes are included, to varying degrees, in the policies in each of these countries:

- Learning is valued and celebrated.
- Partnerships and mutual obligations among stakeholders are built.
- Building foundations for lifelong learning for all students is a priority of schools.
- Learning is the centre of economic, social, and cultural development with active development of linkages between spheres of economic and social activity.
- There is a whole-of-government approach.

- Continuous learning at local level is a priority.
- Access to learning opportunities for non-participants in adult population and those with basic skill deficiencies is strengthened.
- The workplace is recognised as a key learning environment.
- Technology is actively used in supporting policies and strategies.
- Adult and community education is used to develop a learning culture.
- Artificial boundaries between forms and kinds of learning are eroded.

These researchers postulated that a shared vision of Australia as a learning society was not being promoted and there was no infrastructure and related policies to foster collaboration and build partnerships between stakeholders at the local level. In addition, they believe that the connections between VET policy and economic and social policy were not sufficiently developed at local level to foster national objectives such as building an innovative culture, regenerating country areas, and adapting to change.

Learning in the workplace

The extent of training undertaken in the workplace was mentioned earlier, with 80% of wage and salary earners indicating they undertook some form of training in 1997 (ABS 1998b). Only 20% of these employees undertook structured training which was provided externally to the workplace, while 33% undertook structured training in the workplace. By far the most commonly reported form of training (72%) undertaken by these employees was unstructured, on-the-job training. However, research into learning in the workplace has only recently been undertaken (Billett 2001). This section will discuss the goal of learning in the workplace as well as the advantages of creating experts in the workplace. The learning approaches which can be used to achieve the goal will also be examined. Two broad strategies for effective workplace learning are then outlined followed by consideration of the literature on informal or non-formal learning in the workplace and learning in work teams.

The goal of learning in the workplace is to develop vocational expertise. Billett has researched learning in the workplace and one of his contributions has been to clarify and analyse outcomes and to determine what is meant by 'expertise'. He notes that becoming an 'expert', or as described in the cognitive literature, 'the skilful use of knowledge', requires more than just technical skills because it reflects the norms and values of that vocational practice. Expertise also reflects how the experts solve problems or conduct non-routine tasks or relate to clients and the appropriateness of their behaviour and the solutions. In other words, experts require extensive participation within a community of practice or the workplace, where the attributes required to respond to non-routine tasks and transfer their vocational knowledge to new situations can be further developed.

In earlier work Billett (1999) proposes that the processes involved in learning, problem-solving and skills transfer are similar, as they require an individual to interpret and construct the problem or new situation. He believes that, in the workplace, in engaging in routine problem-solving activities, learners experience reinforcement of their existing knowledge. Thus, Billett (2001, p.64) identifies five key characteristics of vocational expertise. Expertise is 'relational' in terms of the requirements of a particular work practice, and 'embedded' in terms of requiring a lengthy engagement with the practice. Expertise requires 'competence' in the discourse and activities of the community of practice and the ability to perform and adapt existing and new skills. It is also 'reciprocal' in shaping and being shaped by the community of practice and workplace. Expertise requires 'pertinence' in the appropriateness of the solutions to problems, such as knowing which behaviours are acceptable, and in what circumstances.

Billett (2001) also argues that the development of expert attributes is in the interest of enterprises since they require an adaptable and flexible workforce to respond to change. Expert attributes also enhance the workers' capacity to achieve their personal and vocational goals. Thus, learning in the workplace has the potential to realise the goals of both enterprises and individuals.

Furthermore, Billett (1999, 2001) highlights four elements of the collaborative and guided approaches to learning which are central to his model of workplace learning. These include:

- having in place a logical sequence of workplace activities of increasing complexity and accountability
- making accessible to the learner the goal or product of the workplace activities
- enabling learners to be guided by more expert fellow workers, including mentors and coaches
- providing for learners to receive indirect guidance through activities like listening to and observing other workers.

Thus, Billet emphasises that there must be guidance to help learners avoid inappropriate knowledge, make accessible what is hidden, sequence activities appropriately and provide ongoing opportunities for joint problem-solving.

Strategies for effective workplace learning

Billett emphasises two broad strategies for effective workplace learning. The first strategy involves removing barriers to learning and the second, facilitating learning.

Strategies to remove barriers to learning include those which overcome or inhibit the limitations of the workplace as a learning environment. These limitations Billett (2001, p.98) suggests include 'demarcation, distrust, isolation, absence of experts' and unintended learning such as 'short-cuts, dangerous work practices [and] inappropriate behaviour'.

Moreover, the quality of workplace learning depends on the organisation and management implementing enabling strategies which facilitate learning. Strategies provide workers access to pathways of learning activities supported by interpersonal guidance and collaboration to achieve learning goals. In addition, Billet notes that the organisation must brief new staff or trainees 'regarding the purposes, process and outcomes of their involvement' in workplace learning (Billett 2001, p.195) and provide learning guides which have been carefully prepared for the specific workplace. These strategies were used by the enterprises studied by Dawe (2002) as examples of 'good' training practice.

Informal or non-informal learning

As already noted, learning in the workplace occurs in a numbers of ways and not just through training or formal learning activities. Thus, it is appropriate to look at what researchers have reported about informal or non-formal learning.

Vaughan concludes that 'non-formal workplace learning is experiential, more contextual, more learner-orientated and more often associated with mentoring or coaching support' (Vaughan 2000, p.10). Vaughan (2000) points out that workplace culture shapes non-formal (or informal) learning and can either enhance or inhibit learning.

Vaughan (2000) also notes that, although researchers such as Marsick and Watkins and Garrick, have tried to distinguish between informal and incidental learning, informal learning includes incidental learning. Types of informal learning include self-directed learning, networking, coaching/ mentoring and performance planning. Incidental learning includes learning from involvement, learning from mistakes/trials and errors, assumptions, beliefs/values, hidden agendas, and the actions of others (Garrick 1998).

Non-formal learning identifies a learning process where scope and time are less defined than for structured learning. Falk (1998) argues that all past experiences are used when people apply their learning and this involves their experiences from social and sporting activities (family and community networks) as well as vocational activities (structured learning and employment). Hence the contribution of non-formal learning, especially in the workplace, is broad and needs greater recognition.

Small businesses clearly illustrate that work and learning are tending to merge together (Gibb 1998; Barnett 1999). Field (quoted in Gibb 1998, p.56) points to a number of non-formal learning methods employed by small business. These include working in other job areas, contributing to project work, participating in staff meetings and post-project meetings, informal one-to-one coaching, and being associated with other organisations. In addition, Blandy et al. (2000) reported that many businesses felt that informal learning and training methods provided 'real knowledge' and were generally superior to formal classroom training.

Figgis and colleagues (2001) noted the importance of informal learning to the respondents who described their experiences of training and learning and their emphasis that 'informal learning amplifies the value of formal training'. However, as pointed out by these researchers, informal learning on its own may limit people to the old ways of thinking and working.

This group of researchers also noted that informal learning meant the opposite of formal learning to the people in enterprises they studied (Figgis et al. 2001). Informal learning was characterised by relatively informal processes, especially related to learning outcomes and the guidance of the learner. Sometimes the outcome is not known in advance (for example, employees are put in a work team to solve a problem) or it may be tightly specified (for example, all employees and volunteers must demonstrate the values and mission of the enterprise). The guidance of the learner may be informal, such as a conversation in the carpark or more intentional through mentoring, networking meetings, job enrichment or modelling.

In looking at informal or non-formal learning in the literature, it is apparent that it brings together broad experience, or experiential learning, from life and work. In addition, training together with informal learning can significantly increase the effectiveness of both.

Learning in work teams

Although the importance of work teams has increased, there is a scarcity of literature on how teams learn. Learning within teams can involve informal and formal learning for both individual team members and the collective workgroup. This section looks at the growing importance of work teams, the objectives and benefits of team learning, and how teams learn.

The growing importance of teams

The impact of technology and global communication has created more competition for Australia firms. To maintain a competitive edge, firms need to gain and sustain a competitive advantage and this has challenged the traditional ways of working and managing within firms to service more demanding clients and customers. Thus, firms have moved away from the traditional hierarchical structure to a flatter management structure. This trend has resulted in the increasing importance of work teams. More problem-solving and decision-making occurs at the level of the work or project team. This more efficiently meets the needs of the customer. Although there is considerable research on adult learning, Phair (2000) notes that there has been very little research to date on adult learning within a work team.

> Although there is very little actual research available on learning within work teams, it is recognised that simply placing people together does not ensure a functional work team. The individuals and the work team need to learn not only new skills and knowledge, but also 'how

> to learn' synergistically; coupled with the need for individual members and the work team to be recognised as separate, albeit interrelated, organisational entities. (Phair 2000, p.193)

What is the objective of team learning?

Senge (1990) defines team learning as:

> … the process of aligning and developing the capacity of a team to create the results its members truly desire. It builds on the discipline of developing shared vision. It builds on personal mastery, for talented teams are made up of talented individuals. (Senge 1990, p.236)

The concept of work-based team learning is complex. It is clearly not enough to be just working together in the same location or on the same project, but requires 'shared meanings, ideas, behaviours and attitudes that must be integrated with an individual, work team and organisation's current tasks and goals' (Phair 2000, p.195). The work team therefore has an integrated and developed system of shared ideas, thoughts, attitudes, behaviour and objectives which create its culture. Team learning specifically refers to a process that is characterised by team-orientated learning behaviours which allow team members to develop mutually acceptable learning outcomes.

The benefits of team learning

Work-based team learning enables the work team to work collaboratively and construct new knowledge, skills and learning capabilities. Thus, the work team can pursue and achieve increased efficiency, innovation, and creativity through the processes of individual and collective interaction and learning (Brown & Duguid 1991 cited by Phair 2000).

How teams learn

The emergence of work teams has drawn attention to the process of continuous workplace learning and an understanding of how work teams learn. Learning in the work team occurs at two levels: firstly, learning at the level of the individual and secondly, at the level of the work team.

Learning at the level of the individual

In her research, Phair (2000) observed and interviewed two work teams from different manufacturing organisations over a six-month period. She noted that the individual learner must have positive feelings of self and a capacity to learn from and with others, recognise their specific learning needs and develop a sense of ownership and self-control over their learning activities and outcomes.

Learning at the level of the work team

The team learning process involves working together with mutual respect and support, sharing information, knowledge and ideas, listening to others' points of view and ideas, negotiating and achieving consensus on work team issues and ensuring that the learning process is inclusive (Phair 2000). Communication is essential for team learning. Thus, specific work team learning skills include dialogue, discussion and reflection. The self-managing work team learns through solving problems and making decisions and this knowledge and expertise lie within the team. Thus the work team can be regarded as a separate learning entity.

Measuring the success of training practices

In this final section, the review addresses the key question, how do firms measure the success of their training practices? The literature appears to have little information on how success is measured in enterprises as formal evaluation of training is not generally undertaken. In addition, training is usually accompanied by other organisational changes which make any measurement of the success of the training more complex. However, the literature reveals that many firms relate training to increased competitiveness, increased market share or simply survival against increased competition in their industry. Recent Australian research has looked at one indicator of success of training practices, that is, returns on investment in training. This section covers measuring the effectiveness of training, what is meant by returns on investment in training, difficulties in measuring returns, possible approaches to collecting data, and how returns can be maximised.

Effectiveness of training versus returns on investment

Doucouliagos and Sgro (2000) point out that there is a difference between returns from training and effectiveness of training. For measuring the effectiveness of training, firms need to set training outcomes and then determine if they are met. If quantitative data are unavailable, qualitative data on perceptions can provide indicative data on the effectiveness of a training program. For example, measurable objectives may be identified in a pre-course evaluation and then the perceptions are collected from participants in a post-course evaluation.

Training costs represent an investment by the firm in their employees. Until recently there was little evidence from Australian firms about their returns from investment in training since '… many firms do not carry out systematic evaluations of their training and even fewer attempt to calculate the returns to their investments' (NCVER 2001, p.1).

What is meant by 'returns'?

Returns on investment in training may be found in many forms. These may include higher levels of value-added activities as a result of greater levels of employee skills, reduced overhead costs to the firm (efficiency of resources or fewer workers compensation claims) and greater ability to innovate in terms of adopting new technology and introducing better work processes (NCVER 2001).

Training may also provide benefits without direct financial benefits, for example, providing a safer workplace, increasing flexibility amongst employees who can perform a range of tasks, increasing staff morale and confidence, or achieving quality assurance rating.

Does training pay?

Recent Australian research on returns to investment in training found that returns for enterprises can be very high and may include improved productivity, improved workplace performance or improved profitability (NCVER 2001). However, Blandy et al. (2000) found that the rates of return depend on the nature of the training program and its relevance to the business needs of the firm. Blandy and colleagues attempted to replicate, for Australia, overseas survey results on the payoff to enterprise training. Their results included that Australian firms provide extensive training for their incoming employees and capture nearly all of the resulting productivity gains. The profitability of firms is directly related to the amount and quality of training that they provide. In addition, the profitability of training is particularly high for training that is highly specific, rapidly accomplished and related to the introduction of new technology. Informal learning is regarded by many businesses as superior to formal classroom training in terms of its impact on profitability and productivity.

In addition, research has shown that vocational training has financial benefits for adult workers. Long (2000) showed that structured training had a positive effect on earnings, but the effect of various forms of unstructured training was mixed (noted in NCVER 2001).

Difficulties in measuring returns on investment

Given the variety of forms, firms need to develop means of measuring the different forms of return on investment in training. One proposition is that the key drivers of the training for the firms should determine the key indicators or measures of success. In other words the measures of their returns on investment in training should match their own drivers of training or the reason for instigating the organisational changes and training.

Measuring returns on investment in training is not always an easy task. The National Centre for Vocational Education Research (NCVER) summary report (2001) highlights some of the difficulties, which include:

- ensuring data collected are reliable
- ensuring data collected are suitable; data collected for other purposes in the firm need to be used with caution
- intangible products, such as in service industries where measuring returns is problematical
- time series data being required, especially to indicate outcome pre- and post-training, as returns may occur in the long term rather than short term
- the benefits of training *per se* may be unseparable from the effect of other changes, such as the introduction of new technology, work practices or business practices.

Possible approaches to collecting data

Possible approaches used to measure the impact of training, or returns on investment in training, include the time series, the match plant and matched pairs approaches.

Doucouliagos and Sgro (2000) used the time series approach to investigate the outcomes achieved from enterprise training investments in the manufacturing and service industries. Examples are described in NCVER (2001):

> The approach was used to analyse the link between productivity and training for the manufacturer of photographic product. The evaluation, conducted over a two-year period, found that a training program to assist machine operators to understand and fix machine problems resulted in a statistically significant increase in productivity and a significant reduction in call-outs.
>
> The methodology has also been successfully applied in the service sector. Doucouliagos and Sgro (2000) evaluated a training program in employment relations for a charity organisation. The training program was conducted in four regions with the aim of retaining valued staff and reducing overall staff turnover. The evaluation compared staff turnover ratios pre- and post-training. The comparisons were conducted over a 6–9-month period, depending on the region. While there was a negative association between training and staff turnover in all four regions the evaluation only found statistical evidence that the training program had improved efficiency and reduced costs for the company in two of the four regions that had conducted the training program. (NCVER 2001, p.8)

The evaluation and analysis procedure advocated by Doucouliagos and Sgro (2000) for firms to measure returns on investment in training includes four components. These are:

- pre-and post-training analysis of data collected
- multivariate statistical analysis to identify factors with a significant impact
- calculation of returns on investment such as cost-benefit ratio
- strategic evaluation to identify if the firm's objectives have been achieved.

Maglen, Hopkins and Burke (2001) used the matched plants approach to investigate whether training investment influences labour productivity in Australian firms in the manufacturing and service industries. The matched plant approach compares firms 'producing comparable products or delivering services that are similar in terms of location, size and quality' (NCVER 2001, p. 8).

Matched-pairs analysis compares the information on the same set of individuals pre- and post-training. This methodology can also be used to compare a group undertaking training, with a control group of similar characteristics, which does not undertake the training. This approach has been successfully applied in evaluating training programs conducted in the service sector such as 'soft skills' training for subtle behavioural or attitudinal changes.

Maximising returns on investment

Research on ways to maximise returns on investment in enterprise training indicates two main categories. Firstly, factors which enhance returns and secondly, factors which inhibit returns to training. Thus, to maximise the returns on investment in training these factors must be understood by Australian firms.

Factors which enhance returns

Firstly, various researchers (Moy & McDonald 2000; Misko 1996; Dawe 2002) have identified factors which enhance returns on investment in enterprise training. Training provision should be:

- aligned with workplace changes, such new technology or new ways of working
- aligned with corporate objectives or business strategy
- focussed on a business problem
- accompanied by innovative human resource management policies and practices
- accompanied by senior management commitment to training and learning
- accompanied by supervisory support and involvement in training and learning
- accompanied by low employee turnover
- delivered at a time and in a form that meets business and employee needs.

As noted by NCVER (2001), returns on investment in training are highest when training is focussed on a specific business problem, and linked to innovation, such as new technology or new ways of working in the firm, such as worker empowerment or flatter management structures. As well as Moy and McDonald (2000), several other researchers have noted that human resource management policies are an important influence on gains from enterprise training (Smith 2000; Misko 1996; Blandy et al. 2000; Dawe 2002). Innovative human resource policies in enterprises ensure individual motivation towards training through incentives and rewards; for example, a policy to promote from within the organisation rather than through external recruitment, or develop broad skill sets in employees such as leadership, team-building and other generic skills. Other incentives and rewards may include performance bonuses or profit sharing.

In addition, Moy and McDonald (2000) noted that returns on investment in training are enhanced when training provision aligns with corporate objectives, senior management commitment, and supervisory support and involvement. This was emphasised also by Misko (1996) who identified three factors as important:

- the extent to which skills learned can be transferred to the job
- the quality of on-the-job supervision of the people who have been trained
- the extent of positive reinforcement of post-training improved performance.

The existence of a formal business or strategic plan has already been noted as the factor most strongly associated with a higher incidence of enterprise training (ABS 1999; Smith et al. 2002).

Several of the case studies investigated by Dawe (2002) indicate that a more stable workforce supports a higher return on investment in training, as reported by Moy and McDonald (2000), also that enterprise training can result in a more stable workforce. For example, a large Australian retail firm, Coles Supermarkets, has changed the profile of its staff over the last five years by almost doubling the proportion of permanent staff. This trend has been opposite from that of the increased casualisation in the general workforce. However, with a high casual staff turnover, Coles was wasting millions of dollars spent annually on training and needed to retain staff with a high level of retail skill and knowledge. With about 80% of Coles staff in permanent positions, the returns on investments in training are greater. The retention rate for entry-level staff is now around 87%. Another case study in the Dawe (2002) was a large Australian beef cattle production company where the introduction of training for all staff, with head stockmen becoming professional workplace trainers and assessors, had a significant effect on retaining staff.

There are a number of ways of delivering training that may increase the benefits from training. These include providing training at a time and in a form that meets business and employee needs, integrating technical and generic skills training, using a range of learner support approaches such as mentoring, coaching and individual development plans, and ensuring effective links between on- and off-the-job training (Misko 1996; Moy & McDonald 2000; Dawe 2002).

Factors which inhibit returns to training

Conversely a number of factors may inhibit returns on investment in training. Those factors identified by researchers, Moy and McDonald (2000) and Misko (1996) include:

- the lack of employee incentive to apply learning on the job
- the lack of appropriate work design and job opportunities to complement training
- the lack of supervisory involvement
- the lack of management commitment
- irrelevant training.

In summary

The literature reveals that large Australian firms are more likely to have formalised, structured training and learning practices for their employees compared with small firms. However, the majority of workplace training is conducted on the job through informal or unstructured learning activities.

The key drivers of enterprise training in 1990s appeared to be workplace change, quality assurance and new technology. However, enterprise training arrangements also depended on the size of the enterprise, industry traditions of training, occupational structure, industrial relations, management attitudes and government training policy.

The type of enterprise training delivered appears to depend on the form of organisational change, for example, teamworking, total quality management, lean production, learning organisation and business process re-engineering.

It appears that the skills and training requirements for Australian enterprises are changing, with increasing demand for higher levels of skills, increasing skill shortages in some industries, re-training of existing workers and the emergence of non-standard forms of employment, such as increasing numbers of casual and outsourced workers. Business strategic planning and globalisation also impact on enterprise training.

The changes in work practices have resulted in new trends being observed in enterprise training. These trends include the growing importance of generic skills training, the decentralisation of training in enterprises, and the individualisation of training.

The definition of training implies instruction and practice in order to gain the skills and knowledge required to become proficient in an activity. Burns (1995) noted that training is where the learning environment is predetermined by an instructor and directed at particular outcomes for the learner, whereas learning implies that the learner acquires skill and knowledge through study, instruction, or experience. This broader concept for learning is emphasised by Burns (1995) who noted that learning causes some change in behaviour or thinking, either observed from the actions or attitudes and emotions of individuals or groups. Enterprise training seeks to ensure that appropriate learning takes place within the enterprise and that the learning is goal-directed and structured to support the business strategy of the enterprise. Thus, the broader concept of a learning process by which a recipient gains new skills, and successful learning practices, should also be included in the study of successful training practices in large firms.

The traditional concept of a training culture in organisations has focussed on accredited and structured training. This concept does not reflect the training and learning which occurs in small enterprises or the evidence that the majority of training in the workplace is on-the-job training. Thus, this literature review encompasses the research which has identified characteristics of enterprise training and learning cultures, learning organisations, learning in the workplace and team learning.

In contrast to a training culture, a learning culture requires a set of attitudes, values and practices within the organisation which support and encourage a continuing process of learning for the organisation and its members. However, according to Figgis and colleagues (2001) what matters is that enterprises have 'a culture which amplifies the value of training and learning through its interpersonal relationships'. In particular the workplace culture shapes non-formal learning and can either enhance or inhibit learning.

Learning organisations are another way of describing organisations with a learning culture or commitment to learning and thus the identified characteristics of learning organisations are highlighted. In particular, Senge (1990) emphasised that systems thinking integrates four other essential disciples of personal mastery, mental models, building a shared vision, and team learning. Watkins and Marsick (1993) considered dialogue and leadership were also essential in a learning organisation.

Most of the training of salary and wage earners is conducted in the workplace and so research on learning in the workplace has become important. According to Billett (2001), effective workplace learning requires organisation and management commitment to strategies involving collaborative and guided approaches to learning to achieve enterprise and individual learning goals. In addition there must be guidance to avoid inappropriate knowledge and make accessible what is hidden. The quality of learning depends on the provision of pathways of learning activities, preparedness of the learners and carefully prepared learning guides for the specific workplace. The development of expert attributes, Billett argues, would provide enterprises with an adaptable and flexible workforce to respond to change.

The emergence of work teams has drawn attention to the need for continuous workplace learning and an understanding of how work teams learn. The team learning process involves working together with mutual respect and support, sharing information, knowledge and ideas, listening to others' points of view and ideas, negotiating and achieving consensus on work team issues, and ensuring that the learning process is inclusive.

Firms should evaluate their training or determine whether it has been beneficial to the firm and participants. In particular, the effectiveness of the training should be evaluated. This requires identifying measurable outcomes or objectives for specific training before the training is commenced. The measures should relate directly to the particular drivers of training for that firm. For example, if training is to improve quality then measures of quality should be recorded. Thus, if the costs of training to improve quality are recorded, these can be related directly to the cost savings associated with improved measures of quality and so benefits to profitability of the firm may be calculated.

To measure return on investment in training, data should be collected on a long-term basis. This allows for pre- and post-training analysis of important factors to be carried out. Time series, matched plants and matched pairs are various approaches which may be used to measure returns on investment in training. The traditional cost–benefit analysis may be used to compare productivity and profitability in manufacturing industries, but it is problematic for the service industries, where products are intangible.

The purpose of the current study is to analyse and investigate in more depth the successful training practices of large Australian firms. For training practices to be successful it is implied that there must be a supportive training and learning culture and thus successful learning practices.

Findings from initial case studies

Determinants of successful training practices

Overview

Forty-nine case studies of large Australian firms (that is, those employing 100 employees or more) conducted by Smith et al. (1995), Noble, Smith and Gonczi (1996), Figgis et al. (2001), Johnston and Hawke (2002) and Dawe (2002), were analysed further to identify the determinants of successful training practices. Collaborating evidence was also found in a study of the relevance of a training culture to small business (Gibb 1998), new management practices (Smith 2002), and factors that influence implementation of training and learning in the workplace (Ridoutt et al. 2002).

Further analysis of the 49 case studies has highlighted nine major elements which contribute to successful training in large Australian firms. These include:

- having in place an organisational culture that supports learning
- sourcing formal training from within the organisation itself
- adopting accredited training, often linked to the National Training Framework
- decentralising the training within the organisation
- increasing the diversity of training and learning approaches
- responding to the needs of the individual
- increasing the use of informal training
- responding to change within the organisation or external to it
- linking training to the major features of a business strategy.

There is another important element which contributes to successful training practices. This is the feedback from individual workers, line managers, workplace trainers, customers and other stakeholders. This is discussed in a separate section on how the large firms measure the success of their training practices.

An organisational culture that supports learning

Johnston and Hawke (2002) noted that the pressure to survive and prosper in an increasingly competitive environment is driving enterprises to look at training issues and to develop a learning culture. The companies wanted to improve products and services and this often meant new skills and new ways of working were needed. Their case studies indicate that, irrespective of whether the learning was formal or informal, the workplace was more communicative and there was more information-sharing and more collaborative work.

Figgis et al. (2001) concluded that the organisational culture that made best use of training and learning had the following characteristics:

- people talk to one another about what they have learned

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- people are willing to share their knowledge and expertise
- skill, knowledge and information are applied to the work at hand—where necessary the organisation shifts so the new skill and learning can be applied
- many different forms of learning are used and supported (from the formal certified course to lunch-time meetings and modelling) and accessible to those who need or want them
- everyone in the enterprise is accorded genuine respect
- there is a can-do climate—that it is not all too hard, too daunting, too much trouble
- the environment encourages and supports people push at the frontiers, taking justifiable risks
- there is a genuine curiosity about solving problems together (Figgis et al. 2001, p.6)

These characteristics of organisational culture are similar to those reported by Brelade and Harman (2001) as the characteristics of 'knowledge workers', who generate, manage and apply knowledge. Individuals who are able to manage their own learning and development are described as having the:

- confidence to take on new tasks and projects
- curiosity to understand and find things out
- co-operativeness to share information and ideas with others
- commitment to learning new skills and new information
- creativity to connect different ideas and experiences.

Those firms which can be termed 'high achievers', often identify themselves as 'learning organisations' and might also be called 'knowledge enterprises'. The trend is towards organisational cultures which support learning both formal and informal.

Sourcing formal training in house

Large firms are sourcing formal training from within the organisation rather than from external providers. Initially, they may use external providers or consultants to assist their own staff to develop enterprise-specific training and learning materials. They may develop all enterprise-specific competencies or they may use the national industry competencies and some enterprise-specific competencies.

Large firms use external training providers to train appropriate staff within the organisation as workplace trainers and assessors. Using their own staff ensures the customisation of training to meet the needs of the organisation. In addition, in-house training delivery provides flexibility which is particularly valued by large firms. For example, they may need this flexibility to enable easy access to training during down-time which may be caused by equipment or supply failure in the construction, food processing or manufacturing industries. In addition, over the last decade, manufacturing plants have introduced three shifts a day over seven days a week to increase productivity and efficiency. This means that it is important to have training available at the times that suit the organisation and the individual workers. Similarly, other industries, such as the finance industry, now provide services 24 hours a day for seven days a week. In hospitality and tourism industry sectors, and increasingly in other areas, workers may have split shifts to cover busy periods. This provides time between shifts that may be used for training or other education studies. Thus, training provision needs to be flexible to meet these work arrangements.

Using their own staff to deliver formal training also supports the organisation's objectives to develop the potential, skills and knowledge of their own employees. This process has been aided by the opening-up of the training market, such as the establishment of non-government registered training organisations, the introduction of the national industry training packages and the user-choice policy initiative to fund the training of apprentices and trainees. These changes have provided employers with an increased variety of training providers (public, private and enterprise registered training organisations) from which to source the formal training for their employees.

Adopting accredited training

There are a number of reasons why large firms are adopting accredited training. These are to improve their recruitment and retention of staff, to ensure consistency and quality of training, and to enable the transfer of staff across a group of enterprises operating in more than one state or territory.

As shown by Dawe (2002), under the national training framework a number of large firms (for example, Coles Supermarkets and Thiess Construction) have qualified as registered training organisations to deliver the national industry qualifications to their own employees. Often, workplace trainers and assessors from such enterprises are also being used to upskill and assess others (for example, Academie Accor in the hospitality industry, Sydney Opera House in the entertainment industry, and Australian Agriculture Company in beef cattle production industry). In addition, some large enterprises (for example, Woolworths and Australian Red Cross Blood Services) have developed enterprise-specific training packages.

Most large firms have employee study incentive programs to support employees by meeting the cost of external formal courses where the training cannot be provided in the workplace. This support is most often provided for management courses. Increasingly, large firms have a partnership with a higher education institution for this purpose (for example Coles Supermarkets' partnership with Deakin University).

Government subsidies to firms, such as those for new apprenticeships, encourage the uptake of formal, accredited training but only of a particular type, such as entry-level training, and only in some occupations. For example, employers in the information communications technologies industry, which has no past tradition of apprenticeship training, are generally not taking on trainees. Recent changes in user choice conditions have also prevented employers from enrolling existing workers into traineeships to gain the subsidy.

Decentralising the training

In the early 1990s large firms tended to have in place large centralised training departments with specialist trainers. There has now been a shift to decentralised training where a training co-ordinator at the senior management level acts as a training broker and negotiates the most appropriate training provider to suit the workplace and employees. Hence, workplace trainers and trained mentors are used to provide the training to employees. In addition, the responsibility for the adequate training of staff has shifted to the line managers. Where the expertise is not available in house, the training co-ordinator or managers will engage external specialist trainers or consultants or use trainers supplied by the equipment vendors.

Where a separate department with the responsibility for corporate training (that is, to deliver or arrange for training in corporate values or code of practice, communication skills and quality system) exists, it now tends to be identified using the terminology of 'learning' or 'staff services' rather than 'training' department. Some examples are 'Learning and Development Services' (NRMA and St George Bank), 'People and Learning Department' (Sydney Opera House) and 'Education and Staff Services' (Aspect Computing).

Larger firms, especially the 'high achievers', tend to have dedicated training facilities and equipment on site, and with the decentralisation of training, there is a trend for these facilities to be available at all divisional levels or plant sites.

Increasing the diversity of training approaches

An enormous diversity of successful training practices are currently used in large organisations. As discussed in chapter 2, training arrangements in large firms may involve formal and informal training, external and internal training provision, on-the-job and off-the-job training and technical and generic skills training. The exact configuration of training and learning activities in firms is dependent on 'moderating' factors or variables that were identified in the industry training studies in the mid-1990s (Smith et al. 1995) and more recently highlighted by Ridoutt and colleagues (2001). These combinations of factors are unique for each enterprise as are the training arrangements that evolve.

Smith and colleagues discovered that the type of training practices in firms depended on the interaction of a number of variables present at enterprise level. Enterprises have different organisational cultures, management strategies, and 'employee relations' climates. For example, if the industrial relations are acrimonious or divisive, the climate will not foster training and learning. It is only if the industrial relations climate is one of trust and co-operation that the organisational culture will be conducive to training, learning and collaboration. As enterprise-level moderators ensure that each enterprise has its own unique determinants, training and learning arrangements vary considerably. This is particularly illustrated in the case studies of similar size firms producing similar products, such as the Uncle Tobys Company and Foodco 1 (Smith et al. 1995).

Ridoutt and colleagues (2002) also found that the characteristics of individual workers, jobs and enterprises influence training and learning in the workplace.

Responding to the needs of individuals

In keeping with their corporate values of doing their best to meet or exceed the expectations of clients, organisations identified as 'high achievers' tend also to value and respect their employees as individuals and aim to develop their potential by harnessing the individual's skills to best use within the enterprise. In addition, they expect employees to take more responsibility for their own learning and career development. Individualised training programs and career pathways are additional features of these firms.

High-achiever firms focus on increasing their competitive advantage through the customisation of products and services. In turn, this has required them to develop new skills for technical or professional specialists. This has also meant an increased focus on training customised to meet the needs of the individual. At the same time all workers are increasingly expected to take more responsibility for their own training and learning. As a result, they now have more input into the decisions about the type of training and learning they will undertake.

Changes in employment practices, such as increased casualisation and outsourcing of functions and tasks, also emphasise the need for individuals to take more responsibility for their own training and learning. This too has resulted in an increased demand for more flexible approaches to training and learning.

Increasing the use of informal training

Large firms are adopting more of the informal approaches to training and learning previously seen in small firms including the use of self-managed work and project teams, mentoring activities, self-study and strategic partnerships.

As Gibb (1998) pointed out, it is a misconception to think that small business does little training. In small business, a great deal of training and learning was occurring but in a more informal way. Small business does not conform to the traditional training culture which generally refers only to formal, accredited training. In general, small business cannot afford the time or expense of formal accredited training but managers and employees may still acquire high-level technical and generic skills through informal, unstructured processes. These include the use of networking, professional associations, short courses and self-study.

Figgis and colleagues (2001) found that informal processes of learning were very important to people in enterprises and, in fact, amplified what people learnt through formal processes.

Responding to workplace change

Workplace change is the major factor which drives training practices in large firms. Workplace change may take many forms (for example, new technology, new products, new markets, new competition, new legislation, or new management). All of these changes may also involve new ways of working. In the mid-1990s the focus of training was primarily on improving and maintaining the quality of products and services, and also on new technology and new ways of working to increase productivity. Enterprise training is still driven by change but the focus is now on maintaining a competitive advantage and developing innovative products or services to find new niche markets or overseas markets and identifying new ways of working which are more efficient.

During the 1990s, major changes in employment practices such as award restructuring, enterprise bargaining, increased casualisation and outsourcing of functions or tasks occurred. For the workforce this has generally meant increasing flexibility through multi-skilling for a variety of tasks, working in teams and more flexible working hours. For example, the finance and banking industry, which has been deregulated by the Australian Government, has had a major organisational change from branch-based to technology-based services, which are now provided 24 hours a day, seven days a week, using telephone and internet access (see case study, NRMA in appendix 1). In the food processing industry, firms have introduced three shifts a day, especially in peak season, and this has increased multi-skilling and career opportunities for many workers.

Government policies which cause major changes to an industry (for example, deregulation of the finance industry) may have a significant impact on training and learning practices in large firms. In other industries (for example, aged care industry) changes in government legislation have had a significant impact on training needs. However, as mentioned earlier, government subsidies for formal accredited training tend only to have a minor impact on training practices in large firms.

Change-management is important, that is, how to lead change, how to assess readiness of a team, identify trouble spots and develop relevant action plans. For example, at St George Bank for middle management development, the training needs of middle managers were firstly identified on the basis of competency assessment and feedback from subordinates. These needs, such as problem-solving, decision-making, team-building and interpersonal skills, were used to design a development program which was issues-based and workplace focussed.

Linking training to business strategy

The corporate vision and business strategy also drive training and learning practices. A key finding in the research by Smith and colleagues was that development of a formal business strategy was the most important factor in boosting the incidence of training (Smith et al. 2002).

Ridoutt and colleagues (2002) investigated further the relationship between the formal business plan and training activity in two industries that is, manufacturing and entertainment. The existence of business plans was found to be widespread (81% of enterprises) in the two industries studied, and they reported that training was mentioned in most (71%) business plans. Almost half (47%) of the surveyed worksites had involved 50% or less of their employees in some form of training in 1999, which is consistent with the findings of Hayton et al. (1996). However, Ridoutt and colleagues did not find a positive relationship between the extent of training effort, that is how much training is being done, and the strategic value of training (represented by the integration of training in the business plan). This differed from the findings of Hayton et al. (1996).

This analysis of successful training and learning practices indicates that most large firms have a corporate training co-ordinator (who may also be the human resources co-ordinator) and a corporate training plan or 'training vision' based on the business strategy. The training co-ordinator or senior manager is responsible for ensuring that all employees are inducted and trained in corporate-wide skill areas, such as the corporate mission and values, and quality accreditation.

Ridoutt et al. (2002) also noted that previous literature on learning organisations indicated that what attracted attention in a learning organisation was that its vision or mission have been developed, and was shared, by all members of the organisation. Dawe (2002) noted a feature of 'good' practice in enterprise training was senior management's commitment to training. Thus, another Ridoutt et al. finding, that there was no relationship between training mentioned in the business plan and the volume of training found in the enterprise, is likely to reflect other enterprise factors. These include all employees sharing the vision, senior management's commitment to training and the analysis of the skills required to support the vision for the enterprise.

A direct link between the existence of training in the business plan and training effort in the enterprise is not necessary, but as reported by Ridoutt et al. (2002), the business plan drives the nature of training and learning found in the enterprise. The strategies in the business plan may have implications for skill development within the enterprise employees or associates, such as sub-contractors, suppliers, and distributors. The strategies may also have implications for educating clients and customers to use new products or services. Thus, what is important is that enterprise training and learning activities are linked to business strategies and based on a skills audit or training needs analysis of individual employees. In order to meet the skill requirements which are demanded by the business strategy, individual training plans are determined. Thus, as already noted, individual workers also influence the training and learning practices within the large firm.

Measuring success of training practices

The evaluation of enterprise training has mostly been neglected in the past, but with growing diversity in arrangements, interest is growing in how to measure the success of training and learning practices. The recent NCVER research on returns on investment addressed this issue. It highlighted different ways that have been used to measure the returns on investment in training. However, the trend to more informal, individualised training and the shift of responsibility for training to line managers, makes it even more difficult to identify the total cost of enterprise training.

Analysis of these case studies indicates that training tends to be competency-based and most large firms are using performance management practices. This usually entails an annual staff performance appraisal and determination of individual training needs. Thus, training and learning practices will tend to be evaluated by line managers, individual workers and workplace trainers. Where a training committee, or joint consultative committee, exists and has input from workplace trainers, line managers and workers, this feedback should ensure that the different approaches are evaluated and training is continuously improved.

In addition, most large firms have a general human resources management information system and this is often used to store and access the training history of employees (see NRMA in appendix 1). In other firms a skills matrix is maintained for employees. For example, a skills matrix for team members was maintained by site/project managers at Thiess Construction while National Mutual Financial Retail Services state training officers maintained a skills matrix for authorised representatives (see Thiess or National Mutual Financial in appendix 1).

In addition, many large firms have customer satisfaction surveys which feed information into their training practices. For example, in one firm, the staff training or learning department was the first point of call for all customer complaints. If several complaints were received, relating to the same individual or the same department, the training co-ordinator would discuss individual or group training options with the line manager. Similarly, staff satisfaction surveys may be conducted to feed information to senior management and thus into corporate or department training plans. For example, at St George Bank, the Learning and Development Department conducted surveys of staff which measured satisfaction with managers. The feedback obtained from line subordinates was used to identify the training needs of managers (see St George Bank in appendix 1).

In summary

This section has provided an overview of the findings from further analysis of 49 case studies of large Australian firms. It has highlighted ten major elements which contribute to successful training in large Australian firms. Table 8 presents the number of firms from each industry sector covered by the initial case studies displaying these elements of successful training:

Table 8: Number of firms displaying elements of successful training practices by industry sector

Industry sector	Finance & insurance	Retail	Food or beverage processing	Agriculture & food processing	Pharmaceutical manufacturing	Blood & blood products	Local government	Metal engineering	Building & construction	Electronic equipment manufacturing	Information communications technologies	Community services	Hospitality	Entertainment
Organisational culture supporting learning	5	4	12	2	1	1	2	1	8	6	2	2	1	1
Sourcing formal training in house—own competencies	5	4	9	2	1	1	2	1	3	6	2	2	1	1
Adopting accredited training, in-house registered training organisation status	0	2	8	2	0	1	2	0	7	2	2	2	1	1
Decentralising training—workplace trainers	5	4	11	2	1	1	2	1	7	6	2	2	1	1
Increasing diversity of training and learning approaches	5	4	13	2	1	1	2	1	8	6	2	2	1	1
Responding to individual training needs	5	4	4	2	1	1	2	1	6	5	2	2	1	1
Recognising more informal training and learning options	5	4	12	2	1	1	2	1	7	5	2	2	1	1
Responding to change—new technology	5	4	9	1	1	1	0	0	5	6	2	1	0	1
Responding to change—increased competition, deregulation or globalisation	5	4	12	2	1	1	0	1	4	6	2	1	1	1
Responding to change—new markets, products, services or legislation	5	4	10	2	1	1	2	1	6	6	2	0	0	0
Linking training to business strategy	5	4	11	2	1	1	2	1	5	5	2	2	1	1
Formal evaluation of training	2	2	5	0	0	1	1	0	3	2	2	2	0	0
Total number of firms (49)	**5**	**4**	**13**	**2**	**1**	**1**	**2**	**1**	**8**	**6**	**2**	**2**	**1**	**1**

Elements of successful training in current practice

Overview

Five follow-up case studies of large Australian firms were conducted as part of the final phase of this study. The aim of this phase was to update information for comparison with the case studies in the literature. The follow-up case studies covered a range of industry sectors, including electrical manufacturing, food processing, government and tourism. In this chapter the follow-up case studies are analysed to identify the determinants of successful training practices.

In the previous chapter, ten major elements which contribute to successful training practices in large Australian firms were identified from the literature. These elements were also found in the follow-up case studies. They include, firstly, having in place a organisational culture which supports learning, secondly, linking training to identified needs from business strategies, and thirdly, responding to workplace change.

This chapter also discusses the training practices in terms of other elements which contribute to successful training practices. These elements include increasing diversity of training and learning approaches, sourcing formal training from within the organisation itself, recognising more informal training opportunities, adopting accredited training, decentralising training within the organisation, responding to the needs of individuals, and evaluating the training.

Finally in this chapter, there is a summary of the key findings from the follow-up case studies.

Background on the firms

Three case studies were selected from the manufacturing sector—Gerard Industries Pty Ltd, Lindemans Karadoc winery and BRL Hardy's Reynella Packaging Department. To contrast with these, a relatively new, unique Australian firm in the tourism industry sector, BridgeClimb™, and the Commonwealth Scientific and Industrial Research Organisation (CSIRO) were selected for study.

Gerard Industries Pty Ltd is the Adelaide-based, family-owned company behind the Clipsal brand of electrical accessories. Described as the 'Coca Cola of the electrical industry', the Clipsal name appears on over 20 000 products in over 25 countries on five continents.

There are 2500 employees in South Australia including the Bowden site in Adelaide with 1600 employees and four 'satellite factories' established in Strathalbyn, Nuriootpa, Murray Bridge and Wingfield. The Clipsal group of companies concentrates on entering developing markets where major building programs are underway, such as China, Malaysia, India and South Africa. There are Clipsal factories in Sri Lanka, Malaysia, Indonesia and South Africa. Strategic partnerships have been formed for the Chinese, Indian and European markets.

A key to the company's success is its self-sufficiency. The company's own advertising, display and marketing departments are located at its Bowden site, while the Custom Group, also owned by Gerard Industries and situated nearby at Brompton, produces all of the company's printing, packaging and carton needs.

Lindemans Karadoc Winery is part of the Southcorp wine company. Southcorp Ltd is Australia's largest winemaker and exporter and is in the top ten wine producers globally. The year 2001 saw a significant change in Southcorp with the restructuring of the company through the merger with Rosemount Estates, Australia's largest family-owned winery, and the sale of non-wine subsidiaries.

As well as Australian wine facilities, Southcorp has operations in California and France. Its export growth is underpinned by extensive international marketing operations and marketing subsidiaries in the United Kingdom, the United States, New Zealand and Singapore.

The Lindemans Karadoc site, which was established in 1973 near the Victorian town of Mildura, has one of the most modern and well-equipped winery and packaging facilities in the world. The winery has 45 salaried workers in cellar operations but during the vintage the workforce is increased to 130 with seasonal workers.

Reynella Packaging Department is part of the BRL Hardy wine company, which is the second largest wine company in Australia and one of the ten largest wine groups in the world. The company was formed in 1992 with the merger of two South Australia wine companies, the Riverland co-operative Berri Renmano Limited and the family-owned Thomas Hardy and Sons Pty Ltd. The company's head office is based at the historic Hardy's Reynella winery.

The Packaging Department is located at Reynella, now a southern suburb of Adelaide. Around 200 workers are employed in this very modern packaging facility where production has more than doubled in the last four years.

BridgeClimb™ provides the world's first open-air, guided and harnessed climb of a major bridge. This unique Australian company, which opened in September 1998, realises the dream of its founder and chairman Paul Cave to make climbing Sydney Harbour Bridge a possibility for all. There are now around 300 climb services, climb leaders and other team members at BridgeClimb™.

Safety on the climb is BridgeClimb's™ top priority and climbers are briefed by professional staff. Climbers must pass the breathalyser alcohol test, complete indemnity forms, dress in protective clothing, pass a metal detector test, and wear safety equipment, including two-way radios and belt harnesses. In addition, the climbers are prepared in the climb stimulator, a test section of ladders and catwalks, at climb-base in the BridgeClimb™ business premises beneath the approach to the bridge in Sydney.

The *Commonwealth Scientific and Industrial Research Organisation* (CSIRO) is a statutory authority established by federal government legislation to conduct scientific research to assist Australian industry and the community. Originally established in 1926, and re-named in 1949, further legislation in 1986 established the CSIRO Board. Policy directions and the efficient performance of the organisation are the responsibility of the CSIRO Board.

Research is planned and resourced around 22 industry sectors. The Commonwealth Scientific and Industrial Research Organisation has appointed sector advisory committees with members representing stakeholders and customers to provide valuable information about the research needs of industry and society. These committees also assist with the uptake of research results by industry.

With 6500 staff, research is carried out in 21 divisions that are largely organised by scientific discipline. However, most divisions contribute to more than one industry sector. Thus, CSIRO is organised around a matrix structure which allows relationships between sectors and divisions and encourages inter-disciplinary research approaches with cross-divisional teams to tackle industrial and environmental problems.

An organisational culture which supports learning

All of these organisations recognise that operatives now require technical skills and knowledge at higher levels to work with more automated or complex processes and to meet international standards of quality, safety, environment protection and customer service. In addition, higher-level communication and interpersonal skills are required by operatives for working in culturally diverse, multi-skilled teams and to meet customers' needs and expectations.

All of these organisations have an organisational culture which supports learning by the provision of on-site formal training to meet organisational needs. In addition, employee-initiated formal training relevant to company needs, and professional or business networking, are supported by these organisations.

These large Australian firms recognise that to maintain their competitive advantage they needed to stay ahead of their global competitors in innovation, efficiency and customer service. Their work environment, therefore, is also a learning environment with open communication, respect for individual workers, and people willing to share their knowledge and expertise, especially in team meetings. For example, BridgeClimb™ team members are expected to contribute from their experience to team meetings, and in Gerard Industries there is an emphasis on understanding cultural differences and 'breaking down barriers' for effective teamwork through social and team activities.

The environment at work encourages and supports people pushing the frontiers, so employees are encouraged to put forward their ideas (for example, Gerard Industries and CSIRO encourage employees to listen to customers in order to find creative or innovative solutions to their problems). Workers are also encouraged to strive for excellence in performance by recognising outstanding performances (such as, Gerard Industries encouraging goal-orientated team performance through bonus schemes, and graded competency assessment at the Lindemans Karadoc Winery and Reynella Packaging Department). In addition, all of the firms also recognised and encouraged outstanding performance with their policy of promoting staff from within the firm where possible.

While recognising the changing role of supervisors to team co-ordinators or leaders who increasingly mentor and coach team members, all of these firms provided training for team-building and leadership skills. The emphasis was also on training for skill and knowledge which can be applied to the work at hand (for example, graded work-based assessment of competency, Frontline Management Initiative program).

These organisations, which are identified by businesses, governments and VET researchers as 'high achievers', provide a culture where workers enjoy challenges, are curious and want to solve problems together. Because of the shared passion and pride in their achievements, there is a positive attitude or 'can do' mentality among workers in the organisation and work environments which support learning. In all these firms, workers are required to share the company's vision and have a greater knowledge of the company's product. For example, the workers at BRL Hardy's Reynella Packaging Department need to know about wine and BridgeClimb™ team members must share a passion for the bridge, harbour and city of Sydney and have a great knowledge of all of these areas.

Linking training to business strategy

All of these organisations have a clearly defined vision or mission and business strategies. Their objectives normally include:

- maximising shareholder value
- consistently exceeding customer expectations

- constantly improving quality, consistency and efficiency
- being flexible and innovative
- being a reliable and preferred supplier
- acting professionally with honesty, integrity, and respect
- developing a culture that supports [our] people and invites them to excel.

Work-based training is provided for employees by all of these organisations. This training is aligned to their business strategies and directed towards meeting their objectives. For operatives, training focusses on team-building, computer skills, quality improvement and occupational health and safety. Team-building training is essential in all of these firms to improve quality, consistency, safety and efficiency.

The manufacturing firms recognise that operatives require increasingly higher skill levels, especially technical skills and product knowledge as new technology is more automated and complex; for example, in the wine production at Lindemans Karadoc Winery or in packaging at Reynella Packaging Department or in production of Clipsal™ electrical accessories. These manufacturing firms believe that increased knowledge by operatives assists them in terms of problem-solving and decision-making (for example, by increasing the speed of their response to risks or hazards on the production line) in order to meet quality standards and reduce wastage.

In addition, higher levels of interpersonal and communication skills are required by operatives to enable them to cope with working in teams on a faster production line or exceeding customers' expectations of service. All of these firms recognise that to maintain a competitive advantage, they must increase workers' skill levels and continue to produce innovative solutions, products or services.

Responding to workplace change

Workplace change in the last four years has been tremendous in these organisations. The major determinant of training and learning practices in large firms is still workplace change. While the emphasis in the mid-1990s was on quality assurance, improving workplace safety and increasing productivity, workplace change is now driven primarily by export growth or increased competition. These firms indicated that while training to meet international quality standards, especially in food safety, occupational health and safety regulations and environmental protection, was still paramount, the main focus is now on maintaining the competitive advantage, with increased innovation, efficiency and customer service.

Supervisors or frontline managers increasingly need leadership skills to mentor and coach highly skilled operatives in their team. Change-management is also recognised as important in these firms so that employees are made aware of changes that are coming. These firms undergoing rapid changes emphasise open communication, frequent training needs analysis and leadership skills.

Other elements of successful training practices

The additional elements necessary for successful training practice, as noted in the analysis of initial case studies, were also found to be important in these organisations. They include increasing diversity of training and learning approaches, sourcing formal training from within the organisation itself, recognising more informal training opportunities, adopting accredited training, decentralising training within the organisation, responding to the needs of individuals, and evaluating the training.

Increasing the diversity of training and learning approaches

These organisations all provide formal and informal training for the workers. As noted already, they also support a learning environment which encourages employees to share knowledge and expertise and work together to find innovative solutions to problems.

Along with Lindemans Karadoc Winery and Reynella Packaging Department, Gerard Industries uses its corporate strength to attract external VET providers to deliver customised formal training to its workers on site. All three enterprises have dedicated training rooms on site; Gerard Industries also has a residential training centre at Strathalbyn. A training co-ordinator or manager brokers training arrangements with external training providers or in-house workplace trainers.

While Gerard Industries currently has 74 apprentices, they are spread over 14 trades. The company is unlikely to become a registered training organisation in its own right because of the diversity of its training needs and the cost of developing and maintaining up-to-date training resources. The company also sees advantages in apprentices having off-the-job training at TAFE and mixing with other apprentices and so gaining ideas from experiences in other firms.

Sourcing formal training in house

In-house workplace trainers are used by these organisations to deliver customised formal induction training and job-specific training. In particular, workers must share the company vision and values which include maintaining awareness of quality, safety and environmental protection issues.

The large firms have more options and are able to broker training arrangements, which include the external provider delivering services on the company site. For example, Gerard Industries uses external providers to deliver computer training to staff at the Bowden site, and both Lindemans Karadoc Winery and Reynella Packaging Department have TAFE lecturers who work on site to assist employees with their Australian Qualifications Framework training (for example, Certificate III in Food Processing).

Recognising more informal training

Informal training and learning opportunities are recognised as important in all these organisations. In particular, multi-disciplinary or cross-functional teams are seen as important in generating innovative solutions to problems or increased efficiency (for example, in CSIRO and Reynella Packaging Departments of BRL Hardy).

The team approach to work is fostered in these firms. Supervisors or training co-ordinators increasingly mentor and coach team members. In addition, team members, who have been assessed as competent, are expected to train other team members and assist each other in order to achieve team goals. These firms recognise that team skills require a better understanding of different personality types, cultural behaviour and learning styles. For example, personality type and learning styles were being assessed for all workers at the Reynella Packaging Department. Similarly, with 60 nationalities represented among their workers, Gerard Industries emphasises increased understanding of cultural differences and motivators; for example, off-the-job activities such as social activities or team activities are encouraged.

In all these firms, individual workers are respected and team members are encouraged to contribute their ideas at regular team meetings or in other ways.

Adopting accredited training

Southcorp Wines staff were involved in the industry development of the standards for the national Food Processing Training Package qualifications. However, not all Southcorp sites adopted the

Australian Qualifications Framework system. At the Lindemans Karadoc Winery, the enterprise agreement endorsed the implementation of the Australian Qualifications Framework system and employees are encouraged to gain the national qualifications for which the company pays the enrolment fees and provides training on site through external providers such as TAFE. In 2002, the company has extended this support to seasonal workers in order to encourage them to higher skill levels and to return to Lindemans Karadoc Winery each vintage.

Cellar operatives at the winery are enrolled in self-paced study programs and are encouraged to complete Certificate III in Food Processing (AQF level 3). In addition, supervisors and shift co-ordinators undertake customised training for Certificate IV in Workplace Training and Assessing and Frontline Management Initiative training programs delivered on the Karadoc site by external providers such as TAFE.

At the Reynella Packaging Department, training and learning materials for food processing certificates (AQF levels 1, 2 and 3) are provided by Murray Institute of TAFE. Since 1997, the contracts-of-training scheme has been implemented to provide employees with nationally-accredited industry training. In the contracts-of-training scheme the federal government provides incentives and the state government provides payroll tax rebates. Together these incentives have allowed a TAFE lecturer to work at the Reynella site on a full-time basis.

In addition, at the Reynella Packaging Department, the Frontline Management Initiative program has been conducted on site for over four years through Murray Institute of TAFE, which also delivers the training for Certificate IV in Workplace Training and Assessing.

Gerard Industries has a tradition of supporting apprentices and continues to provide the on-the-job training for around 75 apprentices spread over 14 trades. The variety of training, the increased cost of providing up-to-date training materials and equipment and the need for contact with others in the industry are reasons cited for abandoning their previous on-site apprentice training centre. The apprentices are now employed through the group training scheme of the Engineering Employers' Association South Australia. However, most apprentices join the staff at Gerard Industries on completion of their apprenticeship. The company provides feedback to the external training providers, such as Regency TAFE education managers, for the off-the-job training for trade apprentices.

Gerard Industries staff work with staff from VET providers, such as TAFE, to ensure the courses for developing leadership and supervisory skills meet the needs of their employees. In addition, appropriate staff undergo training for Certificate IV in Workplace Training and Assessing.

Qualifications for scientific staff at CSIRO are from the higher education sector with over 1700 staff holding doctoral qualifications and 46% having attained a postgraduate qualification. CSIRO offers a project leaders program to its staff and others. Successful completion of this intensive, participatory and practical course gains one unit credit for the Graduate Certificate in Technology Management via Deakin University.

Decentralising training

These large firms have a training co-ordinator who acts as broker for training arrangements, negotiates with external providers to customise the training, and co-ordinates in-house training. This person is often also the learning co-ordinator who supports learners through a mentoring and coaching role and maintains records of training and individual development plans.

Where a large firm may previously have had a large central training department (Gerard Industries previously had a specialised train off-the-job training centre for apprentices) with specialist trainers, these firms now select appropriate operatives to be trained as workplace trainers and/or assessors.

For example, at the Clipsal™ Bowden site there are over 50 workplace assessors and only a few specialist workplace trainers in some divisions, such as the two in Clipsal™ Integrated Systems.

Supervisors are responsible for the training of their team members and are usually on-the-job trainers for members of their team and increasingly act as leaders who mentor and coach team members. Competent team members also have a responsibility in training other workers.

All of the selected manufacturing firms provide training rooms on site as this allows them the flexibility to train during down-time (such as, caused by equipment break-downs). These training rooms may also be used for team meetings and team training sessions. Gerard Industries also has a residential training centre at Strathalbyn.

With external training provider facilitators on site at Lindemans Karadoc Winery and Reynella Packaging Department, employees are more easily able to undertake training in their own time before or after a shift. Employees at Reynella also form informal study groups to assist their learning.

Gerard Industries has been able to negotiate for VET providers to deliver customised training in the company's training facilities (for example, computer and supervisory skills training).

Responding to the needs of individuals

At Reynella Packaging Department the current training plan is focussed on enhancing teamwork by assessing personality types (for example, using the Myers Briggs analysis) and preferred learning styles. The learning styles questionnaire developed by Peter Honey and Allan Mumford explores the four Honey and Mumford learning styles (that is, activists, reflectors, theorists and pragmatists). Additional tests are also undertaken by employees to determine their aptitude for training (for example, Australian Council for Educational Research tests for mechanical reasoning and abstract reasoning for problem-solving). An individual training plan is then developed for each waged employee based on these assessments.

Knowing their learning style preferences enables workers to choose learning opportunities, and to expand their repertoire and become all-round learners. In addition, knowing the personality type and preferred learning styles of team members allows the team leader to take into consideration the styles and motivators of individuals. Thus, all members can be challenged to improve and contribute to team goals.

At Lindemans Karadoc Winery the modules or competencies selected for training by workers are determined by the training co-ordinator in consultation with the managers. Training is based on company needs and the preferences of individual employees. In addition, employees may initiate further education and training to suit their own career goals and, if the course is relevant to the company, their course fees will be reimbursed.

Gerard Industries responds to the needs of individuals and provides training appropriate to their needs. In South Australia, with a multicultural workforce representing around 60 nationalities, raising the workplace literacy levels among employees has been a priority for the last decade. However, being able to communicate in English is only one of the skills required by operatives at increasingly higher levels; others include computer and problem-solving skills.

Employees are encouraged by their organisations to determine their own career goals and so employees may initiate further education and training. In general, if an employee selects an external course which meets current or future needs within the department, the company will reimburse the course fees (for example, at Gerard Industries and Lindemans Karadoc Winery).

Evaluating the training

The human resource manager or training co-ordinator in these firms conducted the evaluations of training and was responsible for recommendations for future training investment to senior managers. The arguments for investment in training were based on evidence of long-term benefits such as maintaining a competitive advantage in the marketplace derived from improved employee relations, increased confidence and self-esteem of the workforce, and the retention of highly qualified and experienced staff. Other benefits of investment in training included increased efficiency through improvement in the analysis of risk by operators, thus minimising wastage of products or workplace accidents.

Conclusions

The follow-up case studies support the findings from the analysis undertaken of initial case studies. The three most important factors in successful enterprise training practices include having in place an organisational culture which supports learning, linking training to the major features of a business strategy and to workplace changes. The other elements relate to the customisation of training and learning practices to meet the needs of the individual workers and the company.

Supporting learning

An organisational culture in which all individuals are respected, a willingness to share knowledge and expertise, and a positive attitude or 'can do' mentality among workers, was essential to successful training and learning. 'Open communication' and, in particular, cross-functional team consultations, also stimulated learning which led to innovative solutions.

A supportive learning culture also encouraged individual development through its human resource practices, such as providing training and learning opportunities for all workers, career planning and promotion opportunities within the organisation, and individual performance feedback in a performance-management system. Within such a culture, employee achievements were recognised through employee or team awards for excellence, quality and consistency or goal-orientated bonus reward schemes. In addition, having a graded competency system ensured that excellence in performance was recognised.

Linking training to the business strategy

The linking of training to the business strategies, by conducting training needs analysis for the skills required to implement these strategies, also led to ensuring its relevance to individuals and to corporate objectives. Because improving quality and consistency and complying with occupational health and safety and environment standards were generally accepted as part of sound business practice, enterprise training now focussed on maintaining a competitive advantage by increasing efficiency in production, developing innovative solutions, products or services, and exceeding customer expectations. In the follow-up case studies, all firms indicated that they were market-driven. Listening to their customers was therefore paramount. Because the company believed that creativity and innovation came from listening to customers, Clipsal™ engineers and technicians were encouraged to talk with customers, such as during the regular visits arranged for contractors.

Responding to workplace change

Responding to workplace change was another major element for ensuring the success of workplace training. Whether the stimulus for workplace change was new technology, new management, new government legislation or new competition, it remained the major driver of enterprise training.

At the strategic level, successful training was often part of the change-management process in preparing staff to accept or implement change. When training was related to current work practices, it became more relevant to individual workers and this increased their motivation to learn. At the Clipsal™ manufacturing plants, workplace trainers believed that most operatives now enjoy change since the company was committed to open communication, listened to employees and had supported their learning to prepare them for change.

Customising training for enterprises and individuals

Other elements which contribute to successful training practices highlight the customisation of training for enterprises and individuals. An increasing diversity of training and learning approaches are used in large firms. They have more choices in how they resource their training functions. Large firms may source formal training from within the organisation itself or import customised training from a range of external training providers. In addition, large firms are increasingly providing training towards externally recognised qualifications in order to attract and retain high-quality staff for a competitive advantage in a global market. Firms have been assisted in implementing training for national industry qualifications by the industry-specific competency standards in training packages.

Informal training also occurred in functional and cross-functional team meetings and project-based activities. These firms had 'training co-ordinators' who were responsible for developing the group training plan but, in general, training delivery was decentralised within the organisation. Supervisors were increasingly taking on the role of workplace trainers and coaches for their teams. This was a response to the higher level skills required of operatives and the expectation that they will be able to solve problems and make decisions. In addition, self-managing teams have become common practice in large firms and this has increased the importance of learning within the team and the use of mentors in the workplace as well as professional or business networks.

At Reynella Packaging Department of BRL Hardy, it was recognised that working in teams required a greater understanding of one's own style of working and that of other workers. The packaging department's training plan focussed on enhancing teams by identifying personality types and preferred learning styles of individual workers.

Increasingly, individuals have been able to help to identify their own particular training needs through the completion of individual training and development plans. While team-building, computer skills, workplace safety and quality training were generally required to implement the firm's business strategies, other training for multi-skilling and personal development undertaken by employees was influenced by the individual's career goals and interests.

Another indication of successful training practices is the evaluation of the training. In reviewing training and assessing feedback from trainees, employees, line managers and customers, firms were able to modify training and increase learning to ensure that they met the needs of the employees and the company. However, if appropriate measures of productivity, profitability, efficiency and value-added activities and training costs are developed, a returns on training investment evaluation model can be used to identify the value of training to the company's profitability. For example, if detailed records of production, such as the causes of down-time, are kept and analysed for training implications, then improvements in down-time can be directly related to the cost of operator training directed at these causes of down-time. In this way investments in specific training is related to increased productivity and a return on training investment may be calculated.

Table 9 summarises these ten elements across these organisations and illustrates how they are manifested.

Implications for industry

This study of large Australian firms found that ten elements provided the foundation for best practice in enterprise training and learning practices. The most important factors necessary for successful training practices are the first three elements, which include having in place:

- an organisational culture which supports learning
- mechanisms to link training to the business strategy
- mechanisms to link training to workplace change.

The other elements relate to the customisation of training for enterprises and individual workers and include:

- increasing the diversity of training and learning approaches
- sourcing formal training from within the organisation itself
- adopting accredited training, often linked to the National Training Framework
- increasing the use of informal training
- decentralising the training within the organisation
- responding to the needs of the individual
- evaluating the training.

Table 9: **Enterprises demonstrating the elements of successful training in current practice**

Element	Gerard Industries Pty Ltd – Clipsal™	Southcorp – Lindemans Karadoc winery	BRL Hardy – Reynella Packaging Department	BridgeClimb™	CSIRO
Organisational culture supporting learning	Respect for all, teamwork, open communication, conduct training needs analysis, detailed training records, support learning and innovation	Respect for all, teamwork, open communication, training co-ordinators, detailed training records and provide learning support on site	Teamwork, detailed training records, support training and personal development, stimulating work environment	Respect for all, teamwork, open communication, support learning and personal development	Support personal development, mentor young scientists, support cross-disciplinary learning, and teamwork
Linking training to business strategy	Training in team-building, quality, safety, leadership, and computer skills to meet business goals and listening to customers for creativity and innovation	Training towards business goals includes team-building, food safety, quality, product knowledge and environment protection	Training in team-building, product knowledge, quality, work safety, leadership to meet business goals	Training in team-building, customer service, work safety, and professionalism to meet business goals	Training linked to strategies includes commercialisation, gaining venture capital, leadership and management
Responding to workplace change	Workplace changes include multi-skilling workers for a more flexible workforce, working in teams and new technology and computer skills	Workplace changes include multi-skilling, working in teams, new technology and computer skills	Workplace changes include multi-skilling, teamwork, leadership, goal-oriented work and new technology	Training linked to multi-skilling, teamwork, leadership and personal development	Workplace changes include performance agreements, commercialisation and innovation
Increasing diversity of training approaches	Source formal training from external providers and internally develop enterprise competencies; also use informal training such as leading customer tours and self-study, team meetings, peer mentoring or coaching; on-site training rooms, residential training centre	Source formal training from external providers and internally develop enterprise competencies, also use formal and informal training from peers and have on-site dedicated training rooms	Source formal training from external providers and internally develop enterprise competencies, also use informal and formal training on the job, team coaching and peer mentoring and have on-site training rooms	Workplace supervisors deliver on-the-job formal training. Team meetings used for formal team training and also for informal training with the sharing of information and experiences.	Source formal training from external providers and internally develop training programs as well as extensive mentoring program and cross-functional teams
Sourcing formal training in house	Qualified workplace trainers and assessors	Qualified workplace trainers and assessors	Workplace trainers for job-specific training	Workplace trainers	Mentor young scientists, project leaders program
Recognising more informal training	Incidental learning through networks, alliances and listening to customers	Work with an experienced colleague first, network with staff on other sites	Team support, informal study groups	Sharing knowledge and experience	Sharing experience through mentoring and peer review
Adopting accredited training	TAFE and other VET providers used—supporting AQF	TAFE co-ordinator on site—supporting AQF, Cert IV WTA and FLMI	TAFE co-ordinator on site—supporting AQF and FLMI		Project leaders program gains credit Deakin University management graduate certificate
Decentralising training	Group training and development manager co-ordinates training providers and in-house group training plan and workplace trainers	Cellar training co-ordinator in support role and workplace trainers	Floor training co-ordinators in support role and workplace trainers	Centralised induction program for new staff. Supervisors have responsibility to train team members	Divisional responsibility, central learning and development in support role
Responding to the needs of individuals	Develop individual training plans	Develop individual training and development plans	Assess personality type, learning style and aptitude, develop individual training and development plans	One-to-one training on the job, team meetings, lateral transfers encouraged, challenge provided	Develop individual performance targets
Formal evaluation of training	Feedback from trainees, line managers and customers, currently reviewing of all processes	Feedback from trainees and line managers	Returns on training investment model of evaluation implemented	Routine customer feedback and staff feedback in team meetings	Routine participant feedback sheets for training courses

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Glossary

Australian Qualifications Framework (AQF)	A nationally recognised set of qualifications for all post-compulsory education and training in Australia, as follows: *Vocational education and training sector* Advanced Diploma Diploma Certificate IV Certificate III Certificate II Certificate I *Higher education sector* Doctoral Degree Masters Degree Graduate diploma Graduate certificate Bachelor Degree Advanced Diploma Diploma
Coach	Trains athletes for contests or teams for games. A workplace coach therefore enhances individual or team performance through the development of vocational expertise and skillful use of knowledge in the work context.
Culture	1 that bundle of signs, symbols, beliefs, traditions, myths, ways of thinking, speaking and doing which characterise the ways of life or behaviour of a given group of people (source: NAGCELL 1997, p.8) 2 important identifying characteristics of a group, sharing certain patterns of living, core values and meanings (i.e. relating to family, religion, language) and sharing participation and transmission within the group, although individual differences always exist (source: Smolicz 1999).
Curriculum	The planned program of teaching and learning constructed by educators, in partnership with learners and others, to achieve agreed educational outcomes.
Experiential learning	Learning through experience, either in a real situation such as a workplace or in role play.
External training	Has training content which is provided by an external training provider, curriculum or training package and is externally monitored and recorded by an external registered training organisation or university.
Facilitator	A person who helps students to learn and discover things for themselves. For example, in the workplace, a facilitator may be a training specialist who assists employees or trainees with their self-paced study.
Formal training	Indicates that the training content has been predetermined by an instructor, or follows a curriculum or training package, and is monitored and recorded by the training provider or educational institution. Formal training is the same as structured training.
Informal learning	Informal or non-formal learning in the workplace is experiential, more contextual, more learner-oriented and more associated with mentoring and coaching support. Types of informal learning include self-directed learning, networking, coaching, mentoring and performance planning (source: Vaughan 2000, p.10)

Informal training	Informal, or non-formal, training activities are instigated by the individual or occur in an ad hoc fashion as the need arises or depending on the circumstances in work situations and elsewhere. Informal training is the same as unstructured training.
Incidental learning	Informal learning includes incidental learning such as learning from involvement, learning from mistakes/trials and errors, assumptions, beliefs/values, hidden agendas, and the actions of others (source: Garrick 1998 p.10)
In-service training	Generally implies professional development of staff, often sponsored by the employer, and usually provided during normal working hours.
Internal training	Where the training content is developed internally by staff or training specialists to meet enterprise and employees' needs, and the training does not conform to any external accreditation process, then the training is called 'internal', that is, enterprise-provided training. Such training may be delivered using the enterprise's own staff with appropriate expertise or training consultants from outside the organisation.
Learning	1 the process of acquiring knowledge, attitudes or skills from study, instruction or experience 2 the process by which recipients gain new skills and understanding.
Learning culture	1 an environment in which opportunities for learning are openly valued, and supported and are built, where possible, into all activities 2 The existence of a set of attitudes, values and practices within the organisation which support and encourage a continuing process of learning for the organisation and/or its members (source: Johnston et al. 2002)
Mentor	A wise and trusted counsellor who gives advice and consultations, and provides an opinion on future procedures.
Non-training learning	The term non-training learning encompasses informal learning which can be described as unplanned learning in work situations and elsewhere, but also includes planned and explicit approaches to learning introduced in work organisations and elsewhere, not recognised within the formal education and training system.
Off-the-job training	Training which takes place away from a person's job or normal work tasks, usually off the premises, for example, at TAFE, but may be on the premises, such as in a special training room.
Off-site training	Training which takes place away from the work premises or workplace.
On-site training	Training conducted at the work site, for example, in a training room, but not on the job.
On-the-job training	Training undertaken while doing the normal work tasks of one's job (i.e. working while under instruction by an experienced colleague or workplace trainer).
Registered training organisation (RTO)	An organisation registered by a state or territory recognition authority to deliver training and/or conduct assessments and issue nationally recognised qualifications in accordance with the Australian Recognition Framework. Registered training organisations include TAFE colleges and institutes, adult and community education providers, private providers, community organisations, schools, higher education institutions, commercial and enterprise training providers, industry bodies and other organisations meeting the registration requirements.

Structured training	All training activities which have a predetermined plan and format designed to develop employment-related skills and competencies. It consists of periods of instruction, or a combination of instruction and monitored practical work. The instruction can take the form of workshops, lectures, tutorials, training seminars, audio-visual presentations, demonstration sessions or monitored self-paced training packages. It can also include structured on-the-job training.' (source: ABS 1998b, p.65)
Successful training practices	Training and learning strategies which provide tangible and intangible benefits for organisations (for example, increased skills and knowledge, required corporate values and attitudes, increased competitiveness, improved employee morale, and more effective employee–manager relations).
Team learning	The team learning process involves working together with mutual respect and support, sharing information, knowledge and ideas, listening to others' points of view and ideas, negotiating and achieving consensus on work team issues and ensuring that the learning process is inclusive. Work-based team learning enables the work team to work collaboratively and construct new knowledge, skills and learning capabilities which lie within the self-managing team.
Training	The development of skills, knowledge, attitudes, competencies, values etc. through instruction or practice in order to become proficient in an activity.
Training culture	An environment in which training is seen as important and is closely linked with business strategy, particularly in creating competitive advantage for an enterprise. Opportunities are given to all employees to participate in training to develop their skills and competencies.
Unstructured training	Training activity that does not have a specified content or predetermined plan. It includes unplanned training that is provided as the need arises and training activity that is not monitored such as self-training through reading manuals or using self-training computer packages (source: ABS 1998b, p.66)
Workplace training (also work-based training, enterprise training)	Training undertaken in the workplace, usually on the job, including on-the-job training under normal operational conditions, and on-site training, which is conducted away from the work process (for example in a training room).

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Appendix 1: Initial case studies

Forty-nine case studies of large Australian firms (that is, those employing 100 employees or more) conducted by Smith et al. (1995), Noble, Smith and Gonczi (1996), Figgis et al. (2001), Johnston and Hawke (2002) and Dawe (2002), were analysed further to identify the determinants of successful training practices. These large firms covered a variety of industry sectors, including finance and insurance, retail, food or beverage processing, agriculture, pharmaceutical manufacturing and packaging, blood and blood products, local government, metal engineering, building and construction, electronic equipment manufacturing, information and communications technologies and the service industries of community nursing and aged care, hospitality and entertainment as shown in table A1.

Table A1: Industry sectors and firms included in analysis of initial case studies

Industry sector	Organisation	Reference
Finance & insurance	NRMA National Mutual Financial Sedgwick Limited St George Bank Westpac	Noble, Smith & Gonczi (1996)
Finance and insurance industry sub-total = 5		
Retail	Myer Grace Brothers Newmans Motor Group Woolworths	Noble, Smith & Gonczi (1996)
	Coles Supermarkets	Dawe (2002)
Retail industry sub-total = 4		
Food or beverage processing	Brownes Dairy Murray Goulburn Co-operative Company Ltd Foodco 1 Foodco 2 The Uncle Tobys Company Ltd Golden Circle Don Smallgoods Smiths Snackfood Company Shepparton Preserving Company Sunicrust Bakeries	Smith et al. volume 4 (1995)
	Harvey Beef Simplot Kelso	Figgis et al. (2001)
	Banrock Wine & Wetland	Johnston & Hawke (2002)
Food or beverage processing subtotal = 13		
Agriculture & food processing	Barrter Enterprises	Johnston & Hawke (2002)
	Australian Agriculture Company	Dawe (2002)
Agriculture & food processing sub-total = 2		
Pharmaceutical manufacturing & packaging	AstraZeneca Australia	Johnston & Hawke (2002)
Pharmaceutical manufacturing & packaging sub-total = 1		
Blood & blood products	Australian Red Cross Blood Service	Dawe (2002)
Blood & blood products sub-total = 1		

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Industry sector	Organisation	Reference
Local government	South Sydney Council (NSW)	Figgis et al. (2001)
	Unley City Council (SA)	Johnston & Hawke (2002)
Local government sub-total = 2		
Metal engineering	Stelform Engineering	Figgis et al. (2001)
Metal engineering sub-total = 1		
Building & construction	AV Jennings Barclay Mowlem Ltd Civil & Civic (Sydney Olympic Construction Site) John Holland Construction & Engineering—Building Division Homebuild 1 Homebuild 2 Walker Civil Engineering	Smith et al. volume 2 (1995)
	Thiess	Dawe (2002)
Building & construction industry sub-total = 8		
Electronic equipment manufacturing	Electrico 1 Osborne Computers Siemens Electrico 3 Matsushita Electric Co Mitec Ltd.	Smith et al. volume 3 (1995)
Electronic equipment manufacturing sub-total = 6		
Information & communication technologies industry	Aspect Computing Pty Ltd (SA)	Dawe (2002)
	Novell	Johnston & Hawke (2001)
Information & communication technologies industry sub-total = 2		
Community services	Baptist Community Services—NSW & ACT (Aged care)	Dawe (2002)
	Royal District Nursing Services	Johnston & Hawke (2001)
Community services sub-total = 2		
Hospitality	Accor Australia and New Zealand	Dawe (2002)
Entertainment & tourism	Sydney Opera House Trust	Dawe (2002)
Service industry sectors sub-total = 4 (total initial case studies of large Australian firms = 49)		

A precis for each firm is included in alphabetical order.

Australian Agriculture Company (AACo)

The Australian Agriculture Company is one of Australia's largest beef cattle producers with 18 cattle stations in Queensland and Northern Territory. Its principal activities are breeding, fattening, and marketing of cattle and the production of dryland and irrigated crops. The majority of its beef cattle products are exported as processed meat or live cattle sales. Only one-quarter of its production is consumed in Australia. The Australian Agriculture Company employs 350 staff drawn from school leavers to university graduates with specialist sections in genetics, nutrition, irrigation, agronomy, feedlots, research, marketing, quality assurance and computer technology. To enhance its quality assurance system, the company gained registered training organisation status in 1977 to provide consistent and accredited qualifications for its station hands. On its cattle stations, around 30 staff, in particular head stockmen, are qualified workplace trainers and assessors with both Certificate III in Agriculture (Beef Cattle Production) and Certificate IV in Assessment and Workplace Training.

Accor Australia and New Zealand

Part of the Asia-Pacific region of an international hotel group founded in France, Accor Australia and New Zealand has 110 hotels and resorts, covering luxury and budget market sectors, catering services and cruise operations. Accor obtained registered training organisation status in 1999 to deliver and assess Certificate I, II, III and IV in Hospitality. The aim is to have at least one supervisor in each department also qualified as Certificate IV in Assessment and Workplace Training to support other staff and trainees. The nationally consistent industry competency-based training allows staff to more easily transfer between Accor hotels and within the industry.

Aspect Computing Pty Ltd (South Australian branch)

Established in 1974 to provide business solutions in the information technology sector, Aspect Computing has customers in Australia and across the world, with its software used in 65 countries. The company provides complete system development, maintenance and support services and has experts in mainframe and desktop computers, operating systems, programming languages and productivity tools. Although its professional staff have been recruited with university qualifications, the South Australian branch of Aspect Computing has mapped industry competency standards in the training package to jobs and developed individualised training plans for each of its 180 employees. It also offers traineeships for school leavers to undertake Certificate IV in Information Technology.

AstraZeneca Australia

AstraZeneca Pty Ltd, a large multinational ethical pharmaceutical manufacturing company, was formed in 1999 from the merger of a Swedish and United Kingdom company and has 50 000 employees in Europe, United States and Australia. The Australian division, AstraZeneca Australia, has 800 employees and manufactures, packages, distributes and exports anaesthetics and drug treatments. With a 24-hour continuous production cycle, the sterile manufacturing factory in north-west Sydney is a leader in blowfill seal technology (soft plastic used instead of glass). In 1995, team-based organisational structure was introduced with a focus on leadership development and competency-based training.

Australian Red Cross Blood Service (ARCBS)

The Australian Red Cross was responsible for voluntary, non-remunerated blood donor system and collection, processing, storage and distribution of blood and blood products in all states and territories since 1929. In 1996, the eight semi-autonomous state and territory Australian Red Cross blood services formed the Australian Red Cross Blood Service, a non-profit organisation whose services are widely dispersed throughout urban, rural and remote Australia. The organisation has 2000 staff and 2500 volunteers, who must work in a highly regulated environment where compliance with government legislation and codes of practice are essential. The Australian Red Cross Blood Service national enterprise training package was developed to support its organisational values which are focussed on respect for individuals, service, innovation and accountability. The Australian Red Cross Blood Service has hundreds of qualified workplace trainers and assessors to train and assess its workforce and volunteers.

AV Jennings

A V Jennings is a large national domestic home builder and Australian-owned company which was launched in Melbourne in 1932. It has a national workforce of 2500 including 250 direct employees and 418 contractors in Queensland. Training is a line-management responsibility and induction and 'refresher' training programs are conducted in house. Short courses in managing staff, supervisory skills and occupational health and safety are delivered by industry providers. Although all technical staff have formal building qualifications, sales staff may not have had any prior formal training.

Banrock Wine and Wetland Centre (BRL Hardy)

BRL Hardy, a publicly listed international wine company from South Australia, was formed in 1992 from a merger of established wine companies and has 22% of Australia's total wine market (based on litres sold). It has vineyards, wineries, bottling and packaging plants and a majority shareholding in a United Kingdom wine merchant and importer. It has a team-based workforce of 1400 full-time and casual workers. BRL Hardy recently invested heavily in environmental protection and education as a major component of its marketing processes through the Banrock Wine and Wetland Centre which it has established on a vineyard near the River Murray. This novel approach to marketing resulted from a special kind of learning culture featuring group learning and cross-functional team collaboration.

Baptist Community Services—NSW and ACT

Baptist Community Services—NSW and ACT is a non-profit Christian care organisation which includes provision of homes for the aged, including nursing homes, hostels and self-care units and provides community aged-care services to the elderly in their own homes. Baptist Community Services obtained registered training organisation status in 1996 and implemented training and assessment for Certificate III in Community Services (Aged Care Work) for its 2000 employees and myriad of volunteers. Training is focussed on continuous improvement and is seen as an incentive for recruiting and retaining staff. Baptist Community Services, in partnership with the University of Newcastle, has an Aged Care Research and Education Services unit. The unit enables Baptist Community Services staff to articulate into a program for Certificate IV in Community Services (Aged Care Work), provides in-service training for Baptist Community Services staff and encourages clinical research within aged-care facilities.

Barclay Mowlem Ltd—Liverpool Hospital project

Sydney-based Barclay Mowlem, whose parent company is in the United Kingdom, is the fourth largest construction company in Australia. It is active nationally and internationally (for example, 60–70% of its activities are government projects) with 900 employees in Australia. Barclay Mowlem does not employ many building labourers but rather manages sub-contractors (for example, Liverpool Hospital Redevelopment project had 45 staff and 250–450 contractors on site). Training is organised through site area work teams and integrated with on-the-job tasks. The company has two specialist trainers, one for induction programs and occupational health and safety training, and the other for facilitating training in the Skills Development Centre. This centre is being developed to provide entry-level training for unemployed workers or on-site skill enhancement and understanding of best practice in construction work for existing workers.

Bartter Enterprises

Bartter Enterprises is a family-owned business located in Hanwood near Griffith. It is the largest producer of fresh and frozen chicken products, table eggs and pasteurised liquid egg in New South Wales and Australia. It has complete integration of its functions from facility design, steel fabrication, concrete batching, building erection, equipment installation and commissioning through to breeding hatching, feeding, growing, processing, marketing and distribution to customers. This company has recently been taken over by Steggles, the second largest producer in Australia, and includes contracted growers. Barrters Enterprises, in obtaining registered training organisation status, has demonstrated that it has appropriate quality systems and procedures to ensure delivery and assessment of quality VET for its workers.

Brownes Dairy

Brownes Dairy, an Australian-owned enterprise, was once part of the largest food processing company in Western Australia. Brownes Dairy produces milk and orange juice for the Australian market but is seeking to export to Asia. It has 150 employees, with production and distribution workers who are predominantly non-English-speaking background males. Its laboratory and administration staff are predominantly female. The installation of an automated and computerised production line in the early 1990s required changes in work practices and culture. While distribution still uses manual handling, the inventory control system is computerised. Quality certified, the production division is in the process of implementing a formal structured training system, while the distribution division has no such plans and is expected to be relocated.

Civil and Civic—Sydney Olympics Construction Site

A subsidiary of Sydney-based multinational company Lend Lease, Civil and Civic had 60 employees on the Olympic site and 340 sub-contractors. Lend Lease supplied a qualified 'learning coach' who worked with all stakeholders on the site to establish training plans which were implemented by site personnel. The training plans included mostly enterprise or site-specific competencies but also some national industry competency standards. Although participation in training was voluntary, Civil and Civic workers were allowed two hours per week for training and were supported for study towards graduate management qualifications. Sub-contractors could pay for their workers to be included in the on-site training provided by Civil and Civic.

Coles Supermarkets—South Australia

A major national supermarket chain, Coles Supermarkets, has 400 stores in Australia and employs 50 000 staff. In South Australia, there were 34 supermarkets and 3600 staff. The company has changed the way training was organised, established a career pathway to attract new employees, further developed its training culture and implemented more effective training focussing on the workplace. It acquired registered training organisation status in 1996 and in 1997 delivered consistent and nationally-accredited industry training qualifications from the Retail Training Package to its employees. Its workplace learning system includes qualified workplace trainers and assessors, workplace coaches and all managers actively involved in training and assessment. Coles Supermarkets has also developed a partnership with Deakin University to deliver management training for its employees.

Don Smallgoods

Don Smallgoods was originally a family-owned company but it was bought in 1988 by international company, Bunge. It produces hams, bacons, salami and poultry-based products for the domestic market but has recently begun exporting. Don Smallgoods employs 440 staff at its plant in the southern suburbs of Melbourne. The new management team emphasised employee involvement and training as the keys to achieving efficiency, world's best practice standards and competitive advantage. They are developing the skills of the existing workforce rather than retrenching and hiring new workers.

Electrico 1

An Australian subsidiary of European multinational, Electrico 1 began business in its Melbourne plant in the 1960s. It now has 2200 employees including workers from 60 different nationalities.

Training was a high priority as a 'tool' for workplace change but, in practice, training was often impeded by a range of factors, such as workload, attitudes of supervisors and family commitments. Their training co-ordinator develops the corporate training plan and there are five specialist trainers. Most training is conducted on the shop floor for enterprise-specific competencies. Individualised training plans are developed for each employee who is allowed five hours a week study time with pay.

Electrico 3

An Australian subsidiary of European-based electronic multinational company, Electrico 3 has 2500 employees. Corporate training for employees is extensive with selling expertise and entrepreneurial behaviour being encouraged. Senior management is also expected to undertake training. Training expenditure comprises 20% on in-house training and 80% on training from external training providers. Training needs are expressed through performance appraisals. The stimuli for training include improving operational processes, exceeding customers' expectation, meeting safety requirements in the plant and using new technology.

Foodco 1

An Australian subsidiary of a United States-based food multinational company, Foodco 1 produces breakfast cereals for domestic and export markets. It has 780 staff in Australia and New Zealand and 650 in Sydney, the headquarters for the Asian region. Previously, training was almost non-existent but, under award restructuring, multi-skilling of employees was introduced and a skills audit was conducted in 1989. Intensive team-building training commenced in 1990 with supervisors and managers developing people and leadership skills on a residential camp. The team-building program for shop-floor employees followed the introduction of multi-skilling and also a literacy program. Most training is company-specific and conducted in house. Training and assessment are recorded in a computerised database and substantial training facilities are provided on site.

Foodco 2

An Australian-owned, co-operative food processing company, Foodco 2 exports 90% of its product, mostly to Asia. With a number of plants in a small rural town, the company employs 1200 staff. Two board sub-committees, for safety and training, ensure that the training and development manager, appointed in 1994, has guidance and support. Self-directed work teams, literacy training, competency-based training and national accredited qualifications have been introduced for employees. In addition, computer training is well-developed within the company with four staff in the User Support Unit and a dedicated computer training room.

Golden Circle

A growers' co-operative originally established in 1947 by government charter, Golden Circle became an independent company in 1992 but all shareholders are still fruitgrowers. It produces canned pineapple and juice and also vegetables, drinks, cordial and jams and packaging for domestic and export markets. The company employs 1700 workers with 680 permanent staff. Under pressure to maintain quality and productivity in a competitive retail environment, it is developing a training plan linked to its business plan and competency standards for warehousing and food processing. Production supervisors attend training for the Certificate in Food Processing at TAFE. The technical training co-ordinator facilitates change and works with groups to identify training needs. The introduction of the four-day week, working 9.5 hours per day, meant that training could be done on Mondays. Participants are paid to attend training but not at overtime rates.

Harvey Beef

Family-owned since 1919, Harvey Beef meat processing company is located in the south-west of Western Australia. The company has recently received training and business awards and employs up to 510 staff. Previously, workers learnt only on-the-job from experienced workers. Occupational health and safety training programs were the exception and were delivered in house by external training providers. Following the appointment of a new chief executive officer who set up a training committee, the company gained registered training organisation status in November 1999. Initially, financial incentives were offered to appropriate staff to complete Certificate II and III in Food Processing and Certificate IV in Assessment and Workplace Training. All packers now commence certificate II, as quality and food safety standards are essential for exporting. Workers from different sections undertake training together which helps them understand each other's jobs.

Homebuild 1

Established 40 years ago in Sydney, Homebuild 1 is a large home builder in New South Wales, Victoria, Queensland and New Zealand. It recently expanded its business interests into marketing and selling houses and home loans. It employs 117 staff including 67 employees in NSW and sub-contracted specialist labour. It has a tradition of apprenticeship training and currently employs 12 apprentices in NSW. Its training focus is on quality and technological change including a new computer system and new building materials. The company does not have a training plan but is planning more in-house activities; for example, a formal mentoring system linked to six-monthly staff appraisals. It also reimburses fees for relevant external courses which workers completed in their own time.

Homebuild 2

Established in Hobart in 1968 by two entrepreneurs from Holland, Homebuild 2 has a bi-cultural workforce of 140 staff with 30 apprentices and trainees. It also engages 400 sub-contractors. The company has six divisions covering a wider than usual range of building and construction activities, including interiors, cultured marble and manufacturing, and exports modular kitchens to China. Line managers are obliged to meet their training responsibilities to achieve performance and quality targets. Employee share and bonus schemes, promotion within the company and competency-based training are important incentives designed to improve performance, quality outcomes and maintain a competitive advantage. In addition, employees undertake short courses for occupational health and safety and computer training.

John Holland Construction and Engineering—Building Division

A component of the international John Holland group, the Building Division operates in all Australian states with 483 employees nationally and extensive use of sub-contractors. It is developing a corporate training strategy and is focussing on improving the skills of its workers, as 86% of workers in this industry have no formal training. Training has been provided through TAFE, unions or in house. A full-time trainer has recently been appointed. Training is currently directed at site needs and skill shortages. However, in future, training will be determined by corporate goals, skill deficiencies and the nature of projects.

Matsushita Electric Company

An Australian subsidiary of a Japanese parent company, Matsushita Electric Company started in Sydney in 1968 and manufactures televisions under the Panasonic label. It has 150 employees. The Training and Development Department manager reports directly to the general manager and the company is pursuing training provider registration. The company is trialling national industry competency standards and also has company-specific competencies. In-house training is provided to workers as paid overtime and engineers regularly travel to other plants. The company emphasises self-directed teams, continuous improvement of quality and increased flexibility through a multi-skilled production workforce. Employee requests for training are collected once a year and considered by the training committee.

Mitec Ltd

Australian-owned, Brisbane-based manufacturer of microwave technology since 1981, Mitec Ltd has a high growth rate. One-third of its production is being exported and it is planning an office in Asia. In a team-based workforce, there are 170 staff of whom 90% are employed full-time. Formerly a spin-off from Queensland University, 20% of staff are engineers who have a tradition of delivering papers at professional conferences. Higher Education Contribution Scheme (HECS) fees are paid by the company for employees who study at university and trade training is undertaken at TAFE. However, most training is conducted by in-house qualified workplace trainers as release from work for training is difficult. Training priorities are determined by supervisors and relate to reducing costs to maintain competitive advantage, changes in production lines, multi-skilling and improving quality. Both internal and external training is formally evaluated using feedback from participants.

Murray Goulburn Co-operative Company Ltd

Murray Goulbourn Co-operative Company is an Australian-owned dairy, based in Melbourne, which supplies approximately 50% of Victoria's milk while 60% of its production is exported. It has six branches and the Leongatha branch employs over 300 full-time staff. In the late 1980s, there was a change in senior management and the company focussed on quality and teamwork. There was a training and education committee at corporate level but no specialist human resource or training staff. Training decisions were devolved to plant level and determined by operational and workers' needs. While competency-based training is being developed, the training focus is on process and maintenance associated with new technology. Occupational health and safety training, computer familiarisation and quality training are continuing. Training is planned, in the future, for supervisors and managers, including 'train the trainer' development. Vehicle fleet drivers are trained in farmer relations and quality testing.

Myer Grace Brothers

Myer Grace Brothers has 71 retail stores and 28 000 employees nationally and Myer Melbourne has about 2500 staff. Restructuring in 1993 reduced the number of managerial staff and introduced team-based work organisation in order to stop declining sales and profits in a very competitive retail market. Traditionally investing heavily in structured training conducted in house for managers and sales staff, it has moved to more on-the-job coaching for sales staff to support the introduction of teams and new technology (for example, electronic data interchange with suppliers). Line managers have the responsibility for training their team members. The national training manager has a team of five specialist training officers. The company is moving towards the use of national industry competency standards, traineeships and management training from Deakin University.

National Roads and Motorists Association (NRMA)

The National Roads and Motorists Association is a large motor organisation with two million members and 5000 employees. The major workplace change has been from branch-based to technology-based services which are provided to members 24 hours a day, seven days a week. Other changes include product diversification and geographical expansion. The Learning and Development Services Department is responsible for corporate retail service, communication and equipment training and there are other specialist training groups (for example, Technical Services Training Department). Industry competencies and enterprise-specific competencies are used and competency-based assessment links with human resource management systems such as recruitment and selection, performance and career management. Cross-divisional consultations inform training program planning, implementation and evaluation.

National Mutual Financial Retail Services

Formed in 1991 as a semi-autonomous business unit of National Mutual Life Association of Australasia Ltd, Retail Financial Services is primarily responsible for the development, administration and delivery of products for the retail managed funds industry. It employs 370 people and there are also 355 self-employed financial planning representatives. Significant staff redundancies in 1992–1993 introduced organisational changes including a flatter management structure, a team-based work organisation and a culture of continuous learning. Training is a response to new technology, for example, computerised client databases and programs to assist financial planning, a competitive market and new legislative requirements. Training related to problem-solving, team-building and coaching and competency-based assessment have been introduced. The state-based training officer maintains records of the competencies attained by staff and the self-employed representatives.

Newmans Motor Group Australia

Newmans Motor Group Australia is a major Mitsubishi motor vehicle dealership. The new and used car retail market is very competitive but there is no recognised industry training. The company employs 154 staff and trains them through induction and on-the-job training. It has developed its own computer systems and markets them to the industry generally. Communication skills training is important for all staff while technicians also have TAFE qualifications. Some staff have university degrees in business areas but many have no accredited qualifications. Department managers keep records of staff training achievements and analyse, evaluate and schedule staff training. Sales representatives are provided with motivational training on a daily basis. Quality management systems and training have been implemented to maintain quality and service.

Novell

The Australian Division of Novell, a USA-based multinational company in networking software with 4500 staff world-wide, employs 300 staff for the Asia-Pacific region. Novell pioneered vendor certification globally in the 1980s. Its certificates have since been embraced by all major information technology companies and integrated with the national VET system through partnerships with registered training organisations. A student transition-to-work program with a registered training organisation provides a steady stream of available staff for the Australian division of Novell. Systems and procedures in the company support a learning culture ethos, including working collaboratively, exchanging information, self-responsibility, individual learning and a questioning frame of mind. Business objectives are reflected within performance monitoring arrangements and reward systems.

Osborne Computers

An Australian-owned computer company since 1982 (originally from the American parent company), Osborne Computers has high competition from overseas companies. Its 420 staff source, build, sell and maintain the latest innovative design in computers with high quality, low cost and excellence in customer service. Training creates and enhances these advantages. The rapidly expanding company recruits new staff who must not have worked in the computer industry before, trains its own staff and promotes from within the company. All training is oriented towards the company's own competencies. The company's competitive advantage is based on the drive and energy of young and ambitious recruits to keep one step ahead of the competition. It also considers its quality system, called 'zero defects program', assists its competitive advantage.

Royal District Nursing Services (RDNS)

Established in 1893, the Royal District Nursing Service provides home and community nursing services in South Australia. The service has a strong tradition of working collaboratively with other partners in the health sector to provide and co-ordinate quality health care, education and research in the community. Every month, 294 full-time employees care for 4000 people who need professional nursing care, mostly wound care. Through open and respectful communication, valuing staff, empowering people towards a collective vision, partnerships and alliances for co-ordinated care, and comprehensive planning and consultation processes, the Royal District Nursing Service has developed efficient and effective practices and demonstrated adaptive learning. For strategic planning purposes, the quality improvement manager conducted a gap analysis between standards and practice.

Sedgewick Limited—Victorian Division

Sedgewick is an international risk consultancy and insurance broker with corporate headquarters in the United Kingdom and in Melbourne, the headquarters for the Asia-Pacific region. With 260 offices in 63 countries, the company emphasises working as one company and one team throughout the world. It developed and implemented worldwide service standards and continues to invest heavily in information technology. The Victorian division, which employs 300 staff, has a strong commitment to quality assurance, customer service, staff training and developing and fostering a learning environment. Changes in the nature of business have resulted in emphasis on consulting, risk management, team-building and presentation skills. Six-monthly performance reviews are conducted with one component identifying individual training needs. Training includes coaching, leadership and time management skills.

Siemens

An Australian subsidiary of the German company, Siemens assembles (parts are manufactured overseas) and tests telecommunications equipment, in particular, for Telstra with whom it has a strategic alliance. It employs 1000 people and has a central training department which advises divisional managers. Some staff are sent to Germany for training in new technology and, when they return, they train other staff. The focus is on quality, new products and, as in the engineering industry tradition, technical and trade training. Staff performance appraisals lead to recommendations for training by in-house professional trainers or by leading hands on the job. Siemens also conducts a training program for university graduates.

Simplot Kelso

In 1995, Simplot, a large America-based company, purchased the fish processing plant in Kelso, New South Wales. Simplot Kelso, whose brands include Birds Eye, I&J, Sealord, Edgell and Ciko, has 170 employees and up to 100 casual workers. The new managing director wanted to make the best use of existing staff and turn production lines into strong, self-directed teams. A team co-ordinator, trainer and maintenance technician were appointed for each team. Before determining what training was needed, all of the tasks required were identified by workers and documented by TAFE staff in line with the Food Processing Training Package. Members from the plant floor comprise 80% of the training committee, which also includes the managing director and the human resources manager. Thus, training experts are co-workers and ownership of training is with workers.

Shepparton Preserving Company (SPC)

Based at Shepparton, Victoria, Shepparton Preserving Company was established in 1918 and acrimoniously restructured in 1993 after becoming a public company. It implemented a quality system and is committed to innovation, diversification and flexibility. The company employs 35 permanent staff and up to 1200 casual workers and produces 160 lines of fruit, vegetable and general grocery products with 35% of sales revenue from exports. Training has been concentrated on managers and technical/professional staff, while sales and marketing staff receive motivational training. Equipment changes determine the training of permanent production employees while operators and labourers are encouraged to gain the Certificate in Food Processing, but at their own expense. Computerised personnel files will include skills and training and there is now a training room on site. Job descriptions and a performance appraisal system will also be formalised and integrated with organisational objectives.

St George Bank

St George Bank, with its headquarters in Sydney, was a former building society that became a bank in 1992. It decided to meet the pressure posed by deregulation of the banking industry by pursuing growth. Strategies for growth included acquiring smaller institutions, re-shaping shop-front delivery channels, developing higher quality customer service, revitalising the marketing capability, brand maintenance and expansion, and maintaining a 'people-centred organisation' profile. Annual staff performance appraisals identify training needs and potential career directions. The Learning and Development Department has 25 specialist trainers and formal induction training takes place at Kogarah training rooms. Quasi-project teams are used for training activities. Training for supervisors is provided internally while managers' development recently became issues-based and workplace-focussed following identification of needs through competency-based assessment and feedback from subordinates.

Smiths Snackfood Company

Bought by the international United Kingdom company, United Biscuits, in 1993, Smiths produces potato and cereal-based snack foods for the domestic market with manufacturing plants in four states and a national workforce of 2000. It employs 800 staff in New South Wales where internal career paths are encouraged. Self-managing work teams have been introduced; all supervisors and leading hands have completed train-the-trainer courses and enterprise competency standards are delivered in house by staff. A training and development manager and two full-time training co-ordinators, that is, for manufacturing and sales, have been appointed. There is also a technical trainer in manufacturing. Training needs analysis is part of annual staff performance reviews, while individual skills assessment and recording on skill competencies has commenced. Ongoing investment in new technology reflects its commitment to process improvement and innovation of new products.

South Sydney City

South Sydney City is a local government organisation which employs 1000 staff with diverse training needs. Following a 1996 review, the council wanted to improve its training culture. It formed a learning partnership with the University of Technology, Sydney to develop and deliver courses to key middle managers on site at times to suit employees who gain credit towards the university's graduate management qualification. New flexible approaches to training have moved more to on-the-job training, while recognition of prior learning and national qualifications, which allow portability across jobs and industries, are incentives for employees to undertake further training.

Stelform Engineering

Stelform Engineering is a technology-based metal and engineering company whose market advantage is solving complex problems to meet clients' specific requirements. The company designs, manufactures and erects a wide range of high-quality pressure vessels used in industry for heat exchangers, boilers and ducting. It has three workshops in Newcastle and has recently expanded its workforce from 25 to 100 employees after introducing 'soft skills' training. The managing director realised that open and honest communication to speak frankly, but constructively, to work together as a team, would require new skills. Starting with senior management, a Soft Skills Australia consultant worked with employees for a few days a month for two years. Major new interstate contracts have resulted, but global competition means they also may need to diversify to include on-site installation of other people's equipment. Learning or training strategies include learning by doing, learning from each other, interactive computer-based courses, reading, in-house training for colleagues to act in senior positions while people were on leave, and attending formal off-site training courses and conferences.

Sunicrust Bakeries—Wodonga Bakery

A subsidiary of the international company, Bunge, which is a group of diverse companies in textiles, meat, industrial cereal and bakeries, Sunicrust Bakeries employs 830 people at 12 sites. The semi-autonomous Wodonga Bakery was built by Bunge in 1970 and the bakery manager reports to Bunge Bakery Group operations manager in Melbourne. The regional bakery employs about 90 staff including 73 full-time and 13 casual employees and produces solely for its regional, competitive market. With the appointment of new Northern Regional Bakeries manager, there has been major organisational and cultural change, including the introduction of team-based approaches in sales, a group training and development plan and quality management system, new equipment, cost minimisation and improved service. Production is now continuous (seven days a week) and more efficient. An education and development manager and two training specialists are currently based in Melbourne. The company is expected to appoint a training co-ordinator at each plant so that bakery managers can determine training priorities according to local needs. Training for production staff is delivered on-the-job and designed to broaden work roles.

Sydney Opera House Trust

Opened in 1973, the Sydney Opera House is operated and maintained by the Sydney Opera House Trust under NSW government legislation passed in 1961. It hosts 2000 performances per year and a million tourists. Over 200 permanent and 400 casual staff provide programming, theatre, property and management services. Before the introduction of the Entertainment Industry Training Package (EITP) there were few formal vocational qualifications, especially for theatre technical and front of house skills. In 1999, management started implementing the Entertainment Industry Training Package and registered training organisation status was achieved. The initial focus was for existing staff to provide evidence of competence against the national standards through recognition of current competencies. The People and Learning Department prepared a detailed implementation plan with a team-based approach. Once qualified with Certificate IV in Entertainment, senior technicians and supervisors undertook Certificate IV in Workplace Training and Assessing and are able to train other staff and trainees. They now also assist with provision of recognition of current competencies and Entertainment Industry Training Package qualifications in the community. Most training takes place on the job by 'shadowing' the experienced staff member and using them as mentor. In-house off-the-job training is used to teach theory and demonstrate work practices.

Thiess Pty Ltd—Civil Construction

Part of the large Australian mining and construction company, Thiess construction shifted from traditional top-down control management to self-managing learning teams. Project managers became team coaches and team members are mentors to ensure flexibility, innovation and problem-solving to meet clients' needs. Continuous learning is required to ensure quality, cost-efficiency, safety, environmental protection and up-to-date knowledge and skills. Work teams determine their own training needs. With registered training organisation status Thiess has on-site workplace trainers and assessors to support learning. It has established programs to enhance communication, teamwork, literacy, numeracy and technical skills and encourage innovation, creativity and leadership. Project managers identify numerous quantitative improvements in areas of quality, safety, cost-reduction and productivity.

The Uncle Tobys Company Ltd

Australian-owned and part of Goodman Fielder Ltd group, Uncle Tobys produces breakfast cereals and snack foods for the Australian market and is expanding into the Asian market. It employs 1191 staff (951 full time) at Wahgunyah plant in north-east Victoria and is committed to continuous improvement. The enterprise training plan, which is developed by the training and development manager, is determined by the company objectives. Training is designed to attain key performance indicators and so training decisions are made by production teams where key performance indicator measures are monitored regularly. The company is aiming for registered training organisation status and 300–400 workplace trainers and assessors by 1995 to deliver Certificate in Food Processing to its workers. With a manager and a full-time trainer, the new Open Learning Centre is staffed during both day and night shifts so that training can be undertaken during down-time. Self-paced training materials, videos and interactive touch-screen computers, recognition of prior learning and assessment are available in the Open Learning Centre. For specialist training, where expertise does not exist in house, TAFE is used. Training is focussed on continuous improvement, new technology, effective team operation and leadership.

Unley City Council

A small, inner-suburban local government organisation in Adelaide, South Australia, Unley City Council employs 150 staff. It develops annual business plans and performance measures for business units. It has a comprehensive system of formal and informal training which addresses the needs of business units (teams), individuals and the organisation. Employees are supported by management, which has resulted in a climate of mutual support and learning within the team environment. Team training included conflict management, stress management and development of business plans. Staff have their training needs assessed in annual performance reviews and are encouraged to undertake training programs. Under threat of amalgamation and pressure of funding cutbacks, significant innovations in internal communication and learning were introduced and resulted in administrative efficiency and increased staff skills and self-confidence. The organisational restructure included voluntary redundancies for 10–12 staff which were managed by the teams themselves.

Walker Civil Engineering Pty Ltd

Walker Civil Engineering Pty Ltd is the engineering and construction division of Walker Corporation which is an Australian-owned, Sydney-based industrial and residential property developer, established in 1972, and publicly listed in 1994. Walker Civil employs 151 staff and two or three times as many workers through sub-contractors. Skills are valued by the company which has an emphasis on innovation through a pro-active approach to new business opportunities, new technology and teamwork. Human resource practices include structured training, systematic job rotation for skill development, and implementation of career paths for construction workers. Individualised training plans are reviewed every six months. Monthly meetings of the training committee are held to determine training, especially site-specific training for each new project. A group training plan is to be developed when the skills audit is completed. Oral presentation and writing skills are considered part of the engineer's job. In-house training courses are modelled on external courses but customised by staff in the company and evaluated by participants.

Westpac

Opened in 1817, Westpac is a major Australian bank with its headquarters in Sydney. After a major loss in 1992, Westpac underwent drastic restructure, including importing executive talent and changing from branch-based to functional streams or business units (teams). Training and development were key elements in the creation of a new work culture under deregulation of the industry and new technology. Training is now considered in terms of learning, skill formation and development in the workplace. More on-the-job training and coaching means that workplace trainers have replaced enterprise-wide training specialists except for some areas, for example, occupational health and safety, customer service and corporate induction. Westpac uses its own competencies and has a graduate recruitment program but also offers traineeships. Line managers have significant training responsibilities and individual staff are encouraged to plan their own careers. Training needs analysis is systematic and linked to management tools such as performance appraisal, business plans and company objectives.

Woolworths

Woolworths is major national supermarket chain in Australia with 89 000 employees and 422 stores. In 1995, the national training and development manager led the development of nationally consistent standards in Woolworths and formal recognition for on-the-job work and training. Its enterprise-specific training package was endorsed in 1999 allowing Woolworths staff nationally-accredited industry qualifications. Training plans, based on common standards that can reflect state and store differences, are developed by state and territory training managers with responsibility for personnel training and development at store level. Woolworths supports on-the-job training, coaching and mentoring of new staff, traineeships, promotion from within the organisation and career planning. Increased staff satisfaction, improved productivity and higher staff retention are some of the benefits of Woolworths training. While looking for possible opportunities in overseas markets, Woolworths has been requested to conduct training for management personnel from Indonesia.

Appendix 2: Follow-up case studies

BridgeClimb™—conducting soft adventure tours

Background

The Sydney Harbour Bridge is the world's largest steel arch bridge. It carries eight vehicle lanes, two train lines, a footway and a cycleway on its 49-metre wide deck, which also makes it the world's widest longspan bridge. Officially opened in 1932, in its beautiful harbour location, Sydney Harbour Bridge has become a renowned international symbol of Australia.

The BridgeClimb™ company provides the world's first open-air, guided and harnessed climb of a major bridge. On this small group adventure, participants are escorted by professional climb leaders to the summit of the Sydney Harbour Bridge. Participants on the three-hour BridgeClimb™ adventure are taken 134 metres above sea level day or night in all weather conditions with the exception of electrical storms. They wear professional outdoor adventure wear including a BridgeSuit™, BridgeHarness™ linked to a static line, communication equipment and a BridgeLight™ at night.

It was the vision, commitment, persistence and entrepreneurial skills of BridgeClimb™ founder and chairman Paul Cave which brought to a reality his dream of making climbing Sydney Harbour Bridge a possibility for all. Officially opened in September 1998, BridgeClimb™ received the 2001 New South Wales Tourism Award for Business Excellence and has since won numerous awards and international acclaim.

BridgeClimb™ acknowledges the partnering relationship with the New South Wales Roads and Traffic Authority which allows the enterprise to exist. There is also ongoing liaison with the state government, State Rail Authority, Sydney Harbour Foreshore Authority, City of Sydney and North Sydney Council and the local community. In addition, the City of Sydney set up a Residents' Liaison Committee to monitor the activities on and around the bridge.

Safety on the climb is BridgeClimb's™ top priority and climbers are briefed by professional staff. Climbers must pass the breathalyser alcohol test, complete indemnity forms, dress in protective clothing, pass a metal detector test, and wear safety equipment, including two-way radios and belt harnesses. In addition, the climbers are prepared in the climb simulator, a test section of ladders and catwalk, at climb-base in the BridgeClimb™ business premises beneath the approach to the bridge.

The BridgeClimb™ culture

The BridgeClimb™ vision is to be the ultimate experience of Sydney. Their mission states 'The climb of your life, every climber, every climb.' The company has seven values which indicate how they will deliver their mission. These values are:

- safety
- professionalism
- exceed expectations

- teamwork
- excellence
- fun
- service.

The company values its employees' experience, innovation and excellent team work to meet the challenges of a unique and growing business and exceed the expectations of international customers and the local community. From these values, three main features are evident in the BridgeClimb™ culture. These include focussing on customer service, developing teamwork and supporting individual employees.

Focussing on customer service

BridgeClimb™ focusses on excellence in customer service. To achieve a team working together to achieve the customer's dream, BridgeClimb™ selects new staff with high-level communication skills, customer service experience and the ability to work in a team. Staff also need to be enthusiastic, imaginative, self-motivated and open to new ideas. The company recruits and appoints Australian residents to its staff as climb services team members, climb leaders and Japanese-speaking team members. For those customers who cannot hear, the company also runs Auslan tours (in sign language).

In addition, BridgeClimb™ team members must assimilate the management philosophy and have the appropriate attitudes, sensitivity and tact to apply it with all customers (including non-English-speaking, non-hearing and special need customers). Team members must also explain to potential customers that climbers must be physically fit, not pregnant and satisfy other BridgeClimb™ terms and conditions (including being below the blood alcohol limit of 0.05%).

Members of the media and celebrity tours are managed by a designated, experienced BridgeClimb™ team member. Safety is paramount, so every climber (including celebrities) must obey the rules and follow procedures in preparation for the climb, such as wearing the BridgeClimb Suit™.

A demonstration of the company's focus on listening to customers is that climb team members are responsible for the collection of customer feedback forms following every climb.

Developing teamwork

BridgeClimb™ also focusses on developing teamwork to achieve the customer's dream. New staff are selected for their dedication to teamwork. The company encourages team members to contribute their knowledge, experience and ideas to regular team meetings and training sessions to further develop the team.

There are eleven key operating areas at BridgeClimb™ which cover booking and reception for tours, merchandising, food and beverage sales, the Sydney Harbour Bridge Museum and Pylon Lookout and administration. The company encourages lateral transfers to all key operations areas. This enables Climb Services team members to build knowledge and experience of all areas within the company. It also enhances the development of the team so that the whole company is working together to achieve its goal.

Supporting individual employees

BridgeClimb™ is committed to ensuring its employees reach their full potential, both professional and personal. The company believes that the growth and development of individual team members is vital to the company's success. The company encourages lateral transfers to all key operations areas, provides a career structure and promotes from within. It is committed to recruiting, rewarding and developing all team members on the basis of criteria related to job performance.

Some of the team members are studying at university and only want casual, part-time work which can be flexible in accommodating their university schedules. However, each year there is a recognition ceremony and presentation of a badge to team members to reward long service. There are a number of four-year team members.

Linking training practices to business strategy

The BridgeClimb strategies

BridgeClimb™ aims to provide the ultimate experience in Sydney and to have their customers recommending the experience and re-visiting with other friends and family members (in the style of 'Disneyland'[1]). Five main strategies appear to contribute to the success of BridgeClimb™. These include a commitment to:

- adhering to sound business practice
- exceeding customers' expectations every time
- striving for excellence in professionalism, safety, fun and other company values
- listening to customers, staff, shareholders and the community
- developing its team members.

Adhering to sound business practice

BridgeClimb™ utilises and practises sound business discipline and recognises that long-term strategic approaches are needed to build a strong business. The company's commitment to excellence extends to administration within the company and communication with staff, shareholders and the community. The commitment to excellence in service and safety means the company invests in new equipment and training and development of all staff.

Exceeding customers' expectations

BridgeClimb™ is committed to extraordinary customer service. The company describes exceeding expectations as 'adding value' and 'creating memories' for the customers. To exceed customer's expectations every time, all team members need to fully understand the company's values and assimilate these into their performance at work.

Striving for excellence in professionalism, safety and fun

The company describes striving for excellence as going the extra step, taking care of detail and maintaining an open mind. They believe it is about taking pride in your work, accepting challenges, encouraging others and being friendly, sharing and caring. The company emphasises that it communicates and listens to customers, staff and other stakeholders to ensure safety. It also emphasises training and high standards to ensure professionalism which it describes as acting with integrity towards others and yourself and having an attitude which is positive, respectful, consistent and sensitive.

Listening to customers, staff, shareholders and the community

All climbers are given a customer feedback form to complete after their climb. Information from customers is used in the ongoing development of staff training, operational procedures and BridgeClimb™ products. The company respects individual team members and encourages them to contribute to regular team meetings and training sessions. For example, a team member will share a different approach that worked well in their previous place of employment, and in this way, the team will implement new ideas.

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[1] To all who come to this happy place, *welcome!* Disneyland is your land. Here age relives fond memories of the past … and here youth may savor the challenge and promise of the future. Disneyland is dedicated to the ideals, the dreams, and the hard facts that have created America … with the hope that it will be a source of joy and inspiration to all the world (Walter Elias Disney 17 July 1955). http://www.ratcage.com/disney/parks/disneyland [accessed: 29 July 2002]

Developing its team members

The company provides ongoing learning support and encouragement to team members. It also provides team members with challenges and encourages pride in the company and their work. Leadership skills are developed and rewarded as promotion positions become available.

The company encourages staff to respect and take care of each other and share a passion for the bridge, the harbour and the city. They are encouraged to measure, learn and develop from their experiences.

Linking training to business needs

Training in the company is primarily linked to excellence in customer service, such as listening to customers and developing teamwork. Training is also linked to its business need to utilise international standards of business practice, safety requirements and quality in products and service. The company also liaises with the local authorities and the local community, all of which have needs that must be met. The needs of local authorities and communities are also reflected in the company's training.

Responding to workplace change

Since its opening in late 1998, BridgeClimb™ has been growing rapidly because it had a unique product and its marketing was greatly enhanced by the 2000 Sydney Olympics. It now has over 300 team members. This growth has meant consistent review of operational procedures and the training required. For example, tour groups now leave the climb base every ten minutes during peak times, and so it is important for climb leaders and other team members to adhere to the timing schedule to avoid delays and to ensure safety for all customers.

The company's emphasis on excellence means that it is looking for continuous improvement in all operational areas. For example, since individual climbers are not allowed to carry cameras, the climb leaders are responsible for the photograph of the tour group at the top of the bridge. This means that climb leaders must also be professional photographers and be able to take excellent group photographs in all weather conditions.

With advanced bookings, and re-scheduling tours depending on demand and changes in weather conditions, BridgeClimb™ has a sophisticated corporate management information system.

Training at BridgeClimb™

This section discusses the training practices at BridgeClimb™. Their training practices reflect increasing diversity of training and learning approaches, decentralising training within the organisation, responding to the needs of individuals and evaluating the training.

Increasing diversity of training and learning approaches

BridgeClimb™ uses both formal and informal approaches to training. Customised formal training for Climb Service team members is delivered on site by in-house trainers, for example, the off-the-job, two-day induction training. The company uses workplace supervisors to deliver on-the-job formal training to team members for their first three months. Team meetings may be used for formal team training and also informal training with the sharing of information and the experiences of individual team members.

In the formal induction training, team members are introduced to the company, its shareholders, its strategic partner, its senior managers; they tour the business premises and experience the climb. The company indicates its respect for its team members by clarifying the company's and members' responsibilities for occupational health and safety and in the industrial relations agreement (AWA). Finally, the induction training explains the team members' manual.

During the induction program the team members' responsibilities to the learning process are also clearly explained. These include participating fully in the training, asking relevant questions, making comments, respecting others' point of view, speaking up and seeking clarification, being patient with the learning needs of others, co-operating in group activities, and making the most of the training opportunity. A checklist of induction activities is given to each member to complete by the end of the first day, week and month.

Decentralising training within the organisation

Although the company-wide training such as the induction program, may be organised centrally, training of team members at BridgeClimb™ is generally the responsibility of the line manager; for example, workplace supervisors deliver on-the-job formal training to team members. Team meetings may also be used for formal team training and also informal training with the sharing of information and the experiences of individual team members.

Responding to the needs of individuals

BridgeClimb™ is committed to ensuring its employees reach their full potential, both professional and personal. The company provides ongoing learning support and encouragement to team members. They are encouraged to measure, learn and develop from their experiences. The company also provides team members with challenges and encourages pride in the company and their work. Leadership skills are developed and rewarded as promotion positions become available.

Evaluating the training

Climbers complete feedback sheets on return from the bridge after the group tour. Certainly this provides feedback on the 'WOW' aspect and whether they will recommend the tour to others. This feedback and monitoring any complaints, suggestions and booking numbers will indirectly reflect on the quality of the customer service training of team members.

BRL Hardy—Reynella Packaging Department

Background

BRL Hardy was formed in 1992 with the merger of two successful South Australian wine companies, the Riverland co-operative Berri Renmano Limited, and the family-owned Thomas Hardy and Sons Pty Ltd. BRL Hardy's brands also include Houghton, Banrock Station and Chateau Reynella. The company's head office is based at the historic Hardy's Reynella Winery.

Since 1992, BRL Hardy has become one of the ten largest wine groups in the world with an annual crush of some 260 000 tonnes. It is the second largest wine company in Australia with over 20% of the Australian market. BRL Hardy exports to over 60 countries and has professional sales and marketing teams in the United Kingdom, Europe, Canada, the United States of America and New Zealand.

The company owns 3200 hectares of vineyards and production facilities in Australia, New Zealand, the United States and France. It also buys fruit from over 1000 independent grape growers who work closely with the company to provide quality fruit. Its wineries and packaging centres have a capacity of over 220 million litres.

BRL Hardy wines won more than 800 medals in major national and international wine competitions in 2001. The company also won the Australian Exporter of the Year award and was recognised as Employer of the Year in Workcover's 2001 Safe Work Awards in South Australia. Since opening in 1999, the company's Banrock Station Wine and Wetlands Centre has won Australian tourism and environment awards.

To further its strategy of establishing BRL Hardy as one of the world's leading international producers and marketers of wine, two new joint ventures have recently been established in California and South Africa to produce new brands for the USA and European markets respectively.

This case study focusses on the Packaging Department at Reynella, a southern suburb of Adelaide in South Australia. The Reynella site with its modern and well-equipped packaging facilities is a prime example of the enormous investment made in Australian winemaking. The Packaging Department has around 200 employees spanning all ages, with some workers who have been employed with Hardy for up to 30 years, and many others recruited within the last four years for the new packaging lines.

The company culture, business strategy and workplace change contribute to successful training practices at Reynella. Other elements include a training evaluation system which identifies the value of training to the company's profitability.

The BRL Hardy culture

BRL Hardy values its employees' learning, creativity, innovation and excellent teamwork to meet the demands of large international orders. Three main features of BRL Hardy's culture are apparent at the Reynella Packaging Department. These include developing operational teams, providing learning support and maximising corporate strength.

Developing operational teams

The team approach starts at BRL Hardy with the managing director and senior managers. The senior managers each head a team of staff who are distributed over the company's administration centres, vineyards, wineries and packaging plants. The production and distribution group comprises five sections, that is, grape supply, wineries, packaging and bottling, distribution and sales.

Work processes invariably run across several different operational functions at Reynella. To improve effectiveness of these processes, the different departments must work together as a team. The departments which are involved in preparation and packaging of products include Quality Assurance and Laboratory, Cellar Operations (winery), Stores, Warehouse, Maintenance, and Packaging (bottling and packaging).

Cross-functional teams co-ordinate operations at Reynella via an operations meeting where representatives from each department can discuss issues which are related to continuous improvement of production and service (for example, quality issues). This cross-organisational teamwork enhances commitment to corporate goals, provides rapid feedback on problems with work processes, allows for the sharing of ideas, increases communication across the organisation and builds organisational pride.

In addition, the key components of training to meet food processing, safety and quality standards need to be linked and co-ordinated across the different departments to maximise the success of each of these aspects in the operations at the Reynella site.

Providing learning support

BRL Hardy aims to provide a stimulating environment in which employees can work and grow. The company provides formal, customised, on-site training and encourages learning in cross-functional teams. Employees are also encouraged to pursue further education and training qualifications with course fees reimbursed where courses are perceived to meet the company's needs.

Training and personal development are focussed on encouraging self-efficacy, that is, enhancing the individual's belief in their capability to successfully perform a particular task. Self-efficacy is desired as it enables employees to perform effectively and strive to improve under the pressure of continuous change, increasing complexity and unexpected difficulties.

Maximising corporate strengths

Long-term strategic approaches to business build the strength of corporations. BRL Hardy's corporate strength is built in part on the promotion of results-oriented teamwork and the allocation of resources to the production and marketing of its core brands. There is also an emphasis on constantly improving wine and packaging quality, workplace safety and environmental responsibility. One example of BRL Hardy's focus on innovation is the wine marketing link from the learning project at Banrock Station. This link enables BRL Hardy to gain international recognition for its support for an environmental issue and so increase its competitive advantage.

Corporate systems and procedures ensure the integrity of work processes across a large organisation. Although BRL Hardy's support for the conservation of wetlands won international acclaim to promote the company, it is also recognised that any adverse incident in any part of the company has the potential to impact negatively on the whole company. To avoid adverse incidents and their impact on the company through the international media, all workers in the BRL Hardy group must operate as a team in adhering to core operating principles and procedures based on the international standards and safe work practices. Through co-ordinated training all workers are aware of the company's goals and core operating principles and procedures.

Another strength of large corporations is a well-developed management information system and maintenance of detailed records particularly of production and personnel. For example, at Reynella, detailed personnel and training records are kept. Training records are kept relating to an individual's training and the number of employees trained on each piece of equipment in each packaging line (currently eight lines). Personnel and training records include the results of tests conducted for personality type, preferred learning style, mechanical aptitude and abstract reasoning. Training needs are analysed frequently and the individual's training needs and preferences are recorded for planning purposes. The training records have become even more detailed since 2001, when graded competency-based training was implemented to assist in raising skill levels and improving quality.

Linking training practices to business strategy

The BRL Hardy strategies

The BRL Hardy vision is to provide quality wines for the world. BRL Hardy's mission is to:

- manage the business to maximise the long-term return to shareholders while recognising the importance of customers, employees, suppliers and the community
- build world class brands which promote enduring consumer loyalty by continuing to increase quality and consistency
- achieve [our] objectives by sustaining superior performance, by understanding and satisfying customer needs, by encouraging creative production and marketing skills and through providing a stimulating environment in which to work and grow.

BRL Hardy is determined to remain one of the largest producers of quality wines in the world. Seven major strategies appear to contribute to the ongoing success of the BRL Hardy group.

Marketing globally

Initially, BRL Hardy adopted three main marketing-based strategies as the central component of the ongoing success of the company. The first strategy was to submit as many as possible of the different wine styles and brands to national and international wine shows. This validated the company's market claims for the high quality of their products. The second strategy was to develop a worldwide marketing program which would continue to increase the depth and breadth of its consumer base. The third strategy was to develop identified brands with a specific name and badge which could capture the imagination of consumers on a global scale.

Listening to the customers

BRL Hardy's resources are focussed on creating quality wines and maintaining consistency to meet consumer demand. In addition, high standards of customer service are critical to BRL Hardy's success.

The company's strong, international sales and marketing network reinforces the consumers' association with its core brands. However, marketing needs to be responsive to real issues and interests of potential corporate or individual consumers. The company has succeeded in relating to real issues to customers with its link between wetland conservation and Banrock Station Wines.

Consumers' opinions are valued and inform planning and development in all sections of the company. Production and marketing staff have taken on board customer feedback to develop new products and new markets. In packaging, this has resulted in increased product diversity with new bottle shapes and different coloured glass.

Maintaining world's best practice

BRL Hardy aims to achieve world's best practice in business operations. The company has implemented and maintains a number of different international and national quality standards for food safety, food processing, manufacturing, occupational health and safety and environmental protection. These include the international systems for food safety, namely Hazard Analysis and Critical Control Point (HACCP), quality assurance (International Organisation for Standards ISO9001), and environmental management (ISO14001).

At the Reynella site, additional standards include the national industry competencies for the Food Processing Certificate (FPC), Good Manufacturing Practices (GMP) and the South Australian Workcover Corporation's Safety Achiever Business System (SABS) for occupational health, safety and welfare (OHS&W).

Training, performance management and regular internal audit processes are all aimed at ensuring that all teams and their members follow core principles and procedures established to meet international and national standards and legislative requirements.

Supporting employees

BRL Hardy demonstrates its commitment to its people through its focus on excellence in workplace safety, performance management and leadership development. The company supports its employees by providing formal training on site by both external training providers, such as TAFE, and qualified workplace trainers. The company also sponsors employee-initiated external training where the course is relevant to the company's needs.

Personal development programs are also important in view of the increasing challenges placed on employees to acquire and develop skills required to apply new technology and the need for employees to work in teams. Individual training and development plans are in the process of being linked to the performance management system and to corporate goals.

The team approach to work is being fostered throughout the company. The Packaging Department's culture also encourages excellence in performance through graded competency assessment and recognition of outstanding performance at team meetings and in provision of future training opportunities. Creativity and innovation are also supported, for example, through cross-function teams and management support for employees' ideas. Supervisors are being trained to mentor and coach team members.

Investing in new plant and equipment

BRL Hardy has implemented a strategy to improve production and distribution to support its growing global market. In the last decade, BRL Hardy has invested substantially in new technology and facilities. At the Reynella site in particular, production has more than doubled in the last for four years (from 4.5 million cases of wine in 1997 to an expected 10.5 million cases in 2002). In that time the Packaging Department has installed two additional new lines and another line is planned for next year. In addition, new equipment has been added to the existing lines.

New technology tends to be more automated to increase the accuracy of measurement and the speed of processing. The new equipment is usually more complicated and is microprocessor-controlled. For example, the new labelling machine has the capacity to apply five labels on a bottle at the same time at a much faster rate than older machines. In addition, the labels are now more expensive. Consequently, the down-time of the new labeller will cost more than for the old labellers. With its increased automation, speed and complexity, the new line requires the operators to have higher skill levels, especially in product knowledge and technical skills for problem-solving. In addition, operators are required to be more aware of occupational health and safety, quality assurance, hygiene and sanitation and environmental issues. This increased knowledge is required of workers in order for them to identify hazards, reject products which do not meet the prescribed standards, and to shut down the operation quickly to control further loss of product.

Forming strategic partnerships

BRL Hardy has increased its penetration of the global market by forming strategic alliances. These provide the BRL Hardy group with more quality brands, access to new markets and increased market share in existing markets.

In June 2001, BRL Hardy announced a joint venture with a Californian company, Constellation Brands Inc. The new company, Pacific Wine Partners, has since acquired additional winery facilities and its new brand, Blackstone, is already one of the fastest growing brands in the United States.

A further strategic joint venture with a South African wine company, Stellenbosch Vineyards, was announced in June 2002. This arrangement will create a new branded wine from Stellenbosch Vineyards, which will be marketed in Europe through BRL Hardy's sales and marketing network.

Supporting the environment and community

BRL Hardy is committed to maintaining its environmental responsibility and has taken an international lead in supporting wetland conservation. A major component of its marketing was invested in an integrated project of environmental restoration, ecological education and wine marketing based at the Banrock Station, a vineyard property about three hours drive north of Adelaide.

Since opening in 1999, Banrock Station Wine and Wetlands Centre has won many Australian tourism and environment awards, including the Gourmet Traveller's Innovation in Travel award recognising its uniqueness with world-class food, great wines and a stunning environment. Most recently Banrock Station was awarded an international prize, the 2002 Wetland Conservation Award, presented by Geneva-based Ramsar Convention, which lists wetlands of international importance. Banrock Station Wines' total sponsorship of wetland conservation projects around the world is already over one million Australian dollars.

Linking training to business needs

Training in the company is linked to its business need to maintain international standards in food safety, quality assurance and environment protection. It is also linked to occupational health and safety, food processing and packaging, teamwork, leadership and continuous performance improvement. In particular, training is related to workplace change such as new technology, new machinery, new processes, new products and new work practices.

Packaging operations at the Reynella site involve bottling and packaging, stores, warehouse, cellar operations, maintenance, and quality assurance and laboratory departments. The Packaging Department has a strategic plan with objectives linked to the corporate goals. There are also 'operations meetings' of cross-functional teams, which include representatives from each department, to discuss issues such as quality assurance.

Since 1996, the Packaging Department has been developing and implementing key components of its strategic plan. These components related to standards, procedures, roles and responsibilities. There is also a focus on training through skill levels, personal and team development, leadership and continuous performance improvement. The strategic plan also included developing a performance management system and a training evaluation system. The enhancement phase is taking place in 2002 and includes objectives to enhance:

- teamwork by assessing the individual styles of operators and providing feedback to team leaders and team members
- empowerment of workers by providing further delegation of responsibility
- cross-functional teams by delegating responsibility to different departments.

Additional objectives are to:

- improve the quality standards by defining tolerances of machines and supplies
- implement graded competency training for packaging department employees.

Ensuring that employees become responsible and autonomous is dependent upon a range of other factors, including the provision of clearly defined roles and responsibilities for operators and line supervisors, implementation of an effective performance appraisal system, use of appropriate policies and procedures and the implementation of training plans. Standard operating procedures have been developed for each machine on the packaging lines which greatly assist the floor training co-ordinator to ensure delivery of consistent training.

Responding to workplace change

The rapid growth in the global market and the demand for quality has caused a rapid expansion in production and the installation of new technology. The new technology generally involves greater automation and faster processing of the larger volumes. Greater product diversity has also increased the complexity of some processes (for example, labelling). In order to comply with ISO9002 and ISO14001 standards, Safety Achiever Business System level 3, and Hazard Analysis and Critical Control Point accreditation, BRL Hardy must provide employee training in quality assurance, hygiene and sanitation, occupational health and safety regulations and responsibilities.

The workplace changes have increased the skill levels required by operatives. In particular, they need greater product knowledge and technical skills for advanced problem-solving and greater interpersonal skills to work in teams and at the faster pace. For example, any conflict between team members must be resolved on the line and so employees are expected to have higher-level communication skills to be able to express themselves and be assertive when required.

In addition, operators must be multi-skilled to be able to cope with the increased diversity of packaging lines and their greater level of responsibilities. Although some long-standing employees may not want to learn how to operate a new line, new machinery is being added to the old line and so change is inevitable. With rapid change in the workplace, a training needs analysis must be conducted more frequently.

Today, supervisors are no longer primarily responsible for telling operators what to do. Instead they are increasingly taking on leadership roles as coaches and mentors. Because the level of complexity and ambiguity within organisations is also increasing at a rapid rate, it is virtually impossible for supervisors to specify how staff should deal with the many unanticipated challenges that arise. In such an environment most managers have to supervise, assist and motivate their staff. The need to cope with these added pressures has required managers to empower their staff to make decisions, and to have confidence in their ability to perform their roles.

As already noted, a BRL Hardy objective is to provide a stimulating environment in which employees work and grow. Training and personal development of employees are central components to meet the vision of growth. Employees are stimulated to learn new skills and knowledge through the managers creating their interest in company goals, wine products and new technology. Learning and new ideas are also stimulated through new environments, such as cross-functional teams, alliances with other companies and working in other countries. Employees are also stimulated to learn when they are presented with new opportunities and challenged to produce new products.

Outstanding individual and team performance is recognised and used as motivation for others. Promotion within the company for some employees has been very rapid (for example, a former production line supervisor is now European business manager). Thus, there is a need to seek potential leaders when recruiting new employees.

In the Packaging Department there are now three eight-hour shifts each day and considerable amounts of overtime available to employees. Another recent workplace change has been to introduce 12-hour shifts for three packaging lines.

Previously, most training was undertaken on the job as packaging employees did not need specific knowledge of wines, the wine industry and other issues such as quality, environmental protection, and company's goals. Their problem-solving skills were not evaluated but with the new lines, learning, thinking and decision-making skills are required. Other general skills required by employees are self-discipline, alertness, attention to detail and an appropriate attitude to health and safety.

There has been a low turnover of senior management in the company as challenging opportunities have arisen within the group and alliances. There are always other employees who are ready to fill their positions. There has been little turnover of staff in the Packaging Department but there is some movement of staff to other departments. As new lines are introduced, new workers are recruited by word-of-mouth from employees, via the internet or through a labour hire agency.

With the higher levels of mechanical skills required, recruitment in the Packaging Department now attracts more males, especially those with metal and engineering trade certificates. The department now consists of approximately 60% male and 40% female employees.

Training at Reynella Packaging Department

This section discusses the training practices at the BRL Hardy Reynella Packaging Department in terms of other elements that contribute to successful training practices. Their training practices reflect increasing diversity of training and learning approaches, adopting accredited training, decentralising training within the organisation, responding to the needs of individuals and evaluating the training.

Increasing diversity of training and learning approaches

A variety of formal and informal approaches to training are taken at the Reynella Packaging Department. Formal training is delivered on site through external training providers or workplace trainers. Formal training for operatives relates primarily to the industry competencies in food processing, handling and packaging. The external trainer delivers the theory and knowledge for the national industry competencies while the workplace supervisor delivers on-the-job practical skills training.

There is a dedicated training centre on site at Reynella with a TAFE lecturer in attendance on a full-time basis. This enables training to be undertaken when the packaging line is not running, for example, during down-time which is caused by machinery failure. Previously, employees would have had to take annual leave or a rostered day off during down-time.

Graded competency assessment is used for assessing the formal training to meet national industry competency standards. This involves five grades and is believed to encourage excellence in performance. The highest grade of competence is '5' which recognises an excellent understanding and skill level where the individual is able to problem-solve quickly and accurately. A competence grade of '3' means the person is able to operate the machinery but is likely to be slower to act if there is a problem (this would cause a greater loss). The lowest grade '1' is used when the operator must work alongside a workplace trainer.

Other formal training programs are also delivered by external training providers (for example, the Frontline Management Initiative Program and Certificate IV in Workplace Training and Assessing are delivered by Murray Institute of TAFE).

Internal formal training is provided by workplace trainers and relates to job-specific technical training or housekeeping duties on the packaging line. Housekeeping duties may relate to maintaining quality, hygiene and safety standards.

Employees are also encouraged to go directly to the floor training co-ordinator for assistance. The floor training co-ordinator will observe employees on the job and identify training needs and give feedback to the worker. Providing constructive feedback regularly in a formal manner in performance reviews, and in a goal-oriented manner, allows the development of a greater range of production skills and responsibilities.

Workplace supervisors also provide informal mentoring and coaching of team members. For example, coaching is used to empower team members to make decisions on the job (for example, to reject a product when it does not meet quality standards).

Employees undertaking self-paced formal training will arrange informal study groups and meet at the end of a shift to assist each other. Employees study in their own time and are allowed some paid time at work for study.

Adopting accredited training

Since 1997, the contracts-of-training scheme has been implemented to provide employees with nationally-accredited industry training. In the contracts-of-training scheme the Commonwealth Government provides incentives and the state government provides payroll tax rebates. Together these incentives have allowed for a TAFE lecturer to work at the Reynella Packaging Department on a full-time basis. Food processing certificates for the Australian Qualifications Framework (AQF) levels 1, 2 and 3 are provided by Murray Institute of TAFE. AQF level 3 provides training for supervisors.

The higher level training for AQF level 4 in supervisory management for quality assurance, laboratory, export, logistics and other areas is provided by an external private provider.

A Frontline Management Initiative Program has also been implemented at the Reynella Packaging Department and conducted on site for over four years through Murray Institute of TAFE. The key component of the Frontline Management Initiative Program is for managers to learn how to empower their staff.

Decentralising the training within the organisation

The Packaging Department personnel manager in consultation with the floor training co-ordinator develops a department training plan and brokers the training from external training providers.

Training is based on a needs analysis (gap analysis) for around 200 employees in the packing operations. The personnel manager also evaluates the effectiveness of the training provided.

The floor training co-ordinator and the assistant floor training co-ordinator co-ordinate training and conduct assessment of employees. They also maintain the database of training records of skills competence in the management information system. This system took 12 months to set up two years ago. It will be further reviewed as some skills become redundant.

From the database a spreadsheet showing each employee's machine skills (skill matrix by line) can be produced. The skill matrix indicates the assessment grade reached for each piece of equipment on each line. Each machine has a weighting because some take much longer to fully understand and reach high skill levels (for example the labelling machine may take two months to learn the basics where as the corker may take two hours).

The skill assessment scale has '5.00' as the highest level, which represents excellence in performance, leadership and experience. A rating of '4.00' indicates those who have total understanding of the machinery and are able to train others, while '3.00' means that the employee has a high skill level on this machine and has been assessed as competent. A rating of '2.00' means the employee is able to set up and operate machinery and is ready to be assessed, while '1.00' indicates the employee is able to set up and operate some things but still needs a trainer to do the whole job.

Formal training in Certificate IV in Workplace Training and Assessment is provided to appropriate employees. There are now about 50 qualified workplace trainers and assessors or about one-quarter of the employees in the Packaging Department.

Training courses are advertised to employees through internal memos requesting expressions of interest and through team meetings. There is generally a waiting list of those wanting to be trained (for example, as workplace trainers and assessors).

Responding to the needs of individuals

Teamwork requires a greater understanding of one's own style of working and that of other workers. The Packaging Department training plan is focussing on enhancing teams by assessing personality types (for example, using the Myers Briggs analysis) and preferred learning styles of individual workers. Each employee completes a self-assessment learning styles questionnaire developed by Peter Honey and Allan Mumford. The learning styles questionnaire explores the four Honey and Mumford learning styles (that is, activists, reflectors, theorists and pragmatists).

Knowing their learning style preferences enables workers to choose learning opportunities, and to expand their repertoire and become all-round learners. In addition, knowing the personality type and preferred learning styles of team members allows a team leader to take into consideration the styles and motivation of individuals. Thus, all members can be challenged to improve and contribute to team goals.

An individual training plan is developed for each waged employee. This is based on an analysis of their preferred learning style and training needs. Additional tests are also undertaken by employees to identify their aptitude for training (for example, the Australian Council for Educational Research test for mechanical reasoning and abstract reasoning for problem-solving).

Evaluating the training

The personnel manager (Packaging) believes that all training conducted should have a training evaluation system designed to evaluate its effectiveness and the extent to which it is achieving the designed outcomes. A training evaluation system requires five major steps, which include:

- establishing the key stakeholders and what they need to know in the form of key questions
- developing performance indicators which are linked to key questions and corporate gaols

- designing the survey instruments, and how to manage the survey information
- collecting the performance data and reporting and reviewing outcomes and processes
- identifying the benefits of an evaluation system.

An evaluation system provides senior management with the information to evaluate the effectiveness of training and to determine the way it is helping the corporation achieve its objectives. Employee training is an investment expected to pay a return to business by increasing sales, increasing profits or reducing the cost of doing business.

One of the main reasons for lack of evaluation of training in most enterprises is an accounting system where training costs are treated as an inseparable part of labour costs and not as an investment from which a return is expected.

Costs and benefits

The key objective of a training evaluation model is to allow the company to identify the value of training to the company's level of profitability. Over two years, the personnel manager (Packaging), Peter Garlick and the Murray Institute of TAFE training co-ordinator and education manager (Wine Studies), Des Kemp, have developed a return on investment (ROI) model training evaluation system for the key components of the training plan (that is, Frontline Management Initiative Program, regulations and responsibilities for Hazard Analysis and Critical Control Point accreditation, occupational health and safety, food processing certificate and quality assurance). This aims to provide accountability and a systematic approach to measuring the effectiveness of training (as opposed to just efficiencies).

The return on investment model allows the packaging department to identify the value of training to the company's profitability by measuring its effectiveness in improving the packaging department's level of down-time. For example, the details relating to the down-time are recorded so that improvements in down-time due to training can be measured. The causes of the down-time are identified, coded and recorded in the database. Causes related to operator errors, adjustments and change-over times can be identified and analysed for training implications.

The implementation of graded competency-based training in 2001 is expected to increase skills acquired. Intensive training programs have been implemented to address the specific gaps in skills and knowledge of the operators. This is expected to impact on run time by reducing down-time attributable to operator error adjustment and changeover times.

To determine the return on training investment, the benefits gained are compared to the costs attributable to training (that is, ROI = benefits/training costs x 100%). Thus, benefits and costs need to be identified. Benefits include reduction in run time, and the cost of foregone output (additional packaging) and input (payroll tax rebates and Commonwealth Government incentive payments for 'contracts-of-training'). The costs include the hourly cost of training multiplied by the number of hours of training (including all costs such as replacement labour costs). If return on investment exceeds 100% then training is worthwhile as benefits exceed the costs.

The return on investment reports include the training budget and the impact of training on down-time. In the first phase of implementation of the return on investment model, the potential annual savings to be gained by reducing down-time were based on line number 8 (thus, were approximations only).

Commonwealth Scientific and Industrial Research Organisation (CSIRO)

Background

The Commonwealth Scientific and Industrial Research Organisation (CSIRO) was originally established as the Commonwealth Institute of Science and Industry in 1920 from the wartime Advisory Council of Science and Industry. Federal government legislation in 1926 established a more permanent Council for Scientific and Industrial Research which was located in Melbourne. It was required to carry out research that was connected with the promotion of Australia's primary and secondary industries. After the Second World War, the research brief of the organisation was extended from a primary focus on agriculture and timber products into other growing industrial areas for Australia, such as building materials, wool textiles and coal.

In 1949, the Council for Scientific and Industrial Research was renamed the Commonwealth Scientific and Industrial Research Organisation and over the next three decades the organisation extended its activities into almost all fields of industrial endeavour for Australia and other issues of concern to the government and the community, including the environment, human nutrition, conservation and water supplies. In 1971, the Commonwealth Scientific and Industrial Research Organisation moved its headquarters to Canberra. After a review in 1985, an external board, with the responsibility of developing the policy directions for the organisation, was established together with the position of the chief executive officer. At this time much of the administrative work carried out in its headquarters was transferred to the divisions and institutes that comprised CSIRO's research base.

Major functions of the Commonwealth Scientific and Industrial Research Organisation include carrying out scientific research to:

- assist Australian industry and to further the interests of the Australian community
- contribute to the national and international objectives and responsibilities of the Commonwealth Government
- encourage and facilitate the application and use of the results of its own or any other scientific research.

The Commonwealth Scientific and Industrial Research Organisation is one of the world's largest and most diverse scientific research institutions. It is a statutory authority operating at arm's length from the Commonwealth Government. Research is planned and resourced around 22 industry sectors which are aligned in four main groups:

- agribusiness
- environment and natural resources
- information, manufacturing and service industries
- minerals and energy industries.

In terms of science, CSIRO ranks in the top 1% of world scientific institutions in 11 of 22 research fields (based on total citation publications). Worldwide it ranks third in environment/ecology and fourth in agricultural science. In promoting the commercialisation of science, the Commonwealth Scientific and Industrial Research Organisation is Australia's leading patenting enterprise, holding over 3500 granted or pending patents. More than 70 spin-off companies are based on CSIRO-generated intellectual property and expertise. In 2001–02, Commonwealth Scientific and Industrial Research Organisation scientists won 16 international and 27 national awards for the excellence of their work. Three employees were recognised with the Order of Australia. These awards are a demonstration of the organisation's reputation in research and its application in industry and the community.

The Commonwealth Scientific and Industrial Research Organisation has appointed sector advisory committees with members representing stakeholders and customers to provide valuable information about the research needs of industry and society. These committees also assist with the uptake of research results by industry.

The large infrastructure of the Commonwealth Scientific and Industrial Research Organisation is divided into 21 divisions, which are its business units. Some 6300 employees are employed in four main divisional groups:

- agri-food and fibre
- environment and natural resources
- information technology, manufacturing and services
- sustainable minerals and energy.

Research is carried out in the divisions that are largely organised by scientific discipline but most contribute to more than one industry sector. Thus, CSIRO is organised around a matrix structure which allows relationships between sectors and divisions and encourages the development of interdisciplinary research projects that are conducted across divisional boundaries.

The Commonwealth Scientific and Industrial Research Organisation is also serviced by a number of corporate divisions, including a corporate human resources function which includes corporate learning and development. The chief executive officer, Dr Geoff Garrett, was appointed in January 2001 from the South African national science agency, CSIR. Dr Garrett is a metallurgist who has worked in the university sector in South Africa prior to his career with CSIR.

Commonwealth Scientific and Industrial Research Organisation culture

The Commonwealth Scientific and Industrial Research Organisation aspires to excellence in everything it does and considers its customers as partners in developing innovative solutions for them and for society. The organisation states that integrity, honesty and openness are fundamental to inspiring creativity, and trust is crucial to developing its high-performing teams. Three main features are very important in the organisational culture at CSIRO. These include focussing on scientific scholarship, providing learning support and maximising corporate strength.

Focussing on scientific scholarship

The Commonwealth Scientific and Industrial Research Organisation is an overwhelmingly scientific organisation. The practice of the scientist as a dispassionate inquirer and producer of knowledge is the key element of organisational culture. Scientific culture has traditionally manifested itself through the autonomy of scientists to carry out their investigations free of the trammels of corporate management. Thus, the scientists who comprise the bulk of employees have regarded themselves as enjoying similar academic freedoms to their colleagues who work in the nation's universities. The emphasis is on free inquiry into the great scientific problems of the day. Many of CSIRO's scientists, of course, have come to the organisation after many years in the university system and many keep close ties to universities through collaborative research arrangements and the training of doctoral and post-doctoral students.

A major manifestation of the ethos of scientific freedom at the Commonwealth Scientific and Industrial Research Organisation has been the power of the 21 divisions. Each division is focussed on a collection of related scientific areas such as plant industry, entomology, land and water. Scientists within the divisions have traditionally identified with the work of their scientific discipline rather than with CSIRO as an organisation. In many ways, the organisation has evolved as a federated organisation where executive power has resided with the divisional 'chiefs' rather than with the corporate centre. Thus, each division operates in a highly self-sufficient manner. Despite a number of outstanding successes, cross-divisional co-operation on projects has been less frequent in the past than the organisation would have desired, reflecting the traditional 'purity' of the scientific disciplines that comprise the knowledge base of each division and the scientific reserve about the value of inter-disciplinary research and inquiry.

This 'science in silos' that has been the traditional culture of the Commonwealth Scientific and Industrial Research Organisation has had a significant impact on training and development activities in the organisation. The dominance of the science culture has meant that the emphasis in the divisions has been on the training of scientists in their field. This has been a largely on-the-job affair, reflecting the tradition of mentoring of younger scientists by older scientists that has predominated in the university system of 'supervision'. The Commonwealth Scientific and Industrial Research Organisation has tended to recruit post-doctoral students fresh from doctoral programs in Australia and overseas universities. These new scientists have been attached to project teams led by experienced senior scientists who have borne responsibility for the development of the young scientists in their teams. The emphasis in this development and mentoring process has been on the development of scientific prowess rather than on management and other skills that might be needed by the scientist later in their careers.

Providing learning support

The power of the divisions in the Commonwealth Scientific and Industrial Research Organisation has led to the development of a decentralised training and development and human resources function. The organisation has supported a corporate human resources function for a number of years. In recent years the focus of corporate human resources has been to foster greater collaboration between the divisional human resources functions. The day-to-day human resources function has operated at the divisional level with human resources managers responsible to their divisional chiefs. Thus, training and development activities, beyond the development of scientific capacity, have been conducted at the divisional level by the human resources managers for whom training and development has always been a major element in their portfolios. Not surprisingly, this decentralisation of training and development activities has resulted in a significant differentiation of practice between divisions, with some adopting a highly systematic approach to training and development and others preferring to remain with the traditional, informal systems.

Lately, the development process for scientists at the Commonwealth Scientific and Industrial Research Organisation has been underpinned by the introduction of the performance agreements. Under this system, supervisors set performance targets for scientists and follow-up achievement of these targets on a six-monthly basis. Again, the emphasis in the performance agreement process is on the scientific development of the scientists. Thus, as one supervisor explained, the performance agreements tend to formalise the existing, informal process of mentoring and development and focus on science achievement—publication, citation, funding, conference presentations and the application of their work.

Maximising corporate strength

The Commonwealth Scientific and Industrial Research Organisation is well aware that, as a knowledge-based organisation, its success depends on the knowledge, skills, attitudes and behaviours of its staff. Its corporate strength is the diversity and breadth of its expertise in its 21 research divisions. To maximise the corporate strength of the organisation, there is a matrix of relationships between industry sectors and research divisions. Thus, it assembles operational teams with the most appropriate expertise and resources to tackle industrial and environmental problems with a multi-disciplinary approach. This has enabled the organisation to deliver innovative solutions for industry, society and the environment (for example, the polymer banknote, stretching wool fibres and irrigation water management).

Linking training practices to business strategy

One of the major changes to the Commonwealth Scientific and Industrial Research Organisation, brought about by the appointment in 2001 of Dr Geoff Garrett as chief executive officer, has been the reconceptualisation of CSIRO as a business organisation. Dr Garrett came to the Commonwealth Scientific and Industrial Research Organisation from the South African CSIR and brought with him a more corporate outlook and a determination to fashion the organisation into a modern business organisation based on research and knowledge.

Commonwealth Scientific and Industrial Research Organisation strategies

The focus of Dr Garrett's new strategic directions for the Commonwealth Scientific and Industrial Research Organisation is on:

- the more effective commercialisation of technology
- breaking down the internal barriers between divisions and creating a more unified and customer-responsive 'one-CSIRO'
- developing larger, integrated projects in partnerships with other institutions.

These new directions for the Commonwealth Scientific and Industrial Research Organisation present significant challenges to the traditional way in which it has operated. The emphasis on commercialisation is an extension of a process that has been in train for some time since the federal government insisted that the organisation develop its external earning capacity. Dr Garrett's renewed emphasis on commercialisation has brought into focus the management responsibilities of senior scientists who operate in a supervisory capacity within the divisions. Some divisions, such as Land and Water, have restructured their operations to create clearly designated management positions, rather than project leaders, which provide a career path for scientists based on management responsibilities rather than science. Other divisions, such as Entomology, have decided that the commercialisation of research is a particular skill that it requires specialist staff dedicated to this activity who work with the scientists and divisional managers but are not scientists themselves.

The one-CSIRO policy was described by one informant as a 'work in progress'. The divisions still enjoy a high degree of autonomy compared with similar structures in the corporate world. Dr Garrett has created an executive management council which comprises all the divisional chiefs and operates as the key strategy formulation body for the Commonwealth Scientific and Industrial Research Organisation. The creation of this body has been effective in creating a more corporate management culture in the organisation.

Linking training to business needs

Dr Garrett views training and development as one of the key levers in the implementation of his new strategic directions for the Commonwealth Scientific and Industrial Research Organisation. The executive management council has set a number of priorities for training activities within CSIRO to support the change process. These priorities are:

- management and leadership
- project management
- occupational health and safety
- commercial skills
- e-learning.

The order of these priorities is no accident. Staff polls taken each year have consistently showed that lack of management and leadership at the levels below the divisional chiefs is a key area of concern for staff. This perception of lack of management skills at the middle-management levels has also been confirmed in focus groups of staff organised for the enterprise bargaining process and in exit polls conducted with staff leaving the organisation. The emphasis on project management reflects the focus on the one-CSIRO policy and the importance of occupational health and safety has been highlighted in recent times by a small number of accidents involving workers at different CSIRO sites around the country.

Some divisions have already been using training and development activities as an important lever in their management processes for some time. The Entomology Division for example has tailored its professional development strategy to the division's strategy since the early 1990s. In this division a number of training plans have played an important role in the development of management skills at middle- and junior-management levels. The focus of most of these training plans has been project leaders and senior project leaders. The programs for these groups have normally been resourced using external consultants. The development of career plans has also been a key feature of the training plans.

However, not all divisions in the Commonwealth Scientific and Industrial Research Organisation have taken such a pro-active approach to training and change-management. There is a great deal of inconsistency in the approaches taken to training and development across the still highly autonomous divisions. For this reason, the organisation has recently enhanced their corporate approaches to training and to people management in general.

Responding to workplace change

The Commonwealth Scientific and Industrial Research Organisation has always tried to balance the competing demands of the culture of pure science with the increasingly commercial reality of scientific endeavour in the modern world. The work of the scientists at the organisation results in the development of new products which need to be commercialised if they are to reach the consumers who will use them. The commercialisation of research presents scientists with business problems which they are not trained to deal with. Liaising with venture capitalists or with large, often global, organisations that have the resources to turn their ideas into profitable products has traditionally been difficult for science in Australia, not only at CSIRO.

A further pressure on the pure scientific culture of the Commonwealth Scientific and Industrial Research Organisation has been the progressive insistence of federal governments in Australia that it become at least partly self-funding. Since 1990, the organisation has operated with a target of 30% self-generated funds. Currently 70% of its budget comes directly from Commonwealth Government appropriations. The fact that the organisation has more than met the target for self-funding belies the enormous cultural shift that has taken place in the organisation in order to achieve this goal. The repercussions of self-funding targets have meant that scientists have had to become experts at working with industry partners to generate funds for research. The organisation has had to prioritise its research programs in order to focus on research that can attract outside funding and that has the potential for short-term payoff in the form of patentable products. Thus, the culture of dispassionate and untrammelled scientific inquiry has faced major challenges in recent years. These challenges have highlighted the growing importance of high-level management skills to the success of the organisation.

The appointment of Dr Garrett in 2001 has brought a much greater emphasis on the corporate functioning of the Commonwealth Scientific and Industrial Research Organisation. Senior management in the organisation considers training and development as a key lever in their attempts to forge a more unified and business-like organisation. The focus for this organisational change is the management skills of middle-level managers in the divisions. This is currently the focus for the corporate learning and development team.

The new corporate learning and development group has now been amalgamated with corporate human resources and has taken on a very different role of internal consultancy. This role emphasises working with the divisions to deliver training and development programs rather than acting as a training provider for the elite group of senior managers. Working divisional human resources managers who dedicate a significant slice of their time to working on corporate projects will enable the corporate human resources team to build capabilities within the divisions to deliver effective training which is co-ordinated across the organisation. Thus, training and development will model the one-CSIRO behaviours that the chief executive officer wishes to cultivate throughout the organisation.

Training at the Commonwealth Scientific and Industrial Research Organisation

Training and development at the Commonwealth Scientific and Industrial Research Organisation has mirrored both the culture and structure of the organisation. The highly scientific ethos of the staff at the organisation has meant that the focus has traditionally been on the professional development of the scientific staff. This has involved a combination of judicious recruitment of young post-doctoral staff and an emphasis on the mentoring of staff by more experienced senior scientists in the organisation.

Increasing diversity of training and learning

While the divisions still maintain their separate human resource functions, the corporate human resource function has reviewed its approach to training and development across the organisation. Until 2001, corporate human resources and corporate learning and development operated as separate bodies within the organisation. The corporate learning and development function did not report to corporate human resources and had a particular brief to attend to the training and development needs of only the top 200 managers within the organisation. In general, this approach involved the provision of a high-quality development program for CSIRO's top management cadres. The program proved very popular. It involved a series of residential events run over a period of two years which potential leaders from across the divisions attended in groups of 20–30. The programs were run by the corporate learning and development team and focussed on the analysis of personal management styles and on personal career development. This focus on the personal development of the managers, while popular, meant that the training had little connection to the business strategy of the organisation.

In late 2001, the corporate learning and development function was put under the organisational umbrella of the corporate human resources function (people management) for the first time. This enabled Dr Garrett's aim of having training and development activities acting as a strategic level for change in the organisation to be addressed. A new national learning and development manager was recruited with a brief to widen the learning and development process across the organisation and to change the nature of the department to that of an internal consultancy supporting the training and development activities of the corporate centre and the divisions. As the new learning and development manager put it, learning and development was not there to offer programs but to build the internal capacity of the organisation through an internal consulting role. This change of role has meant considerable change for those employed within the corporate learning and development department.

Relationships with the divisional human resource functions, which had been somewhat tenuous in the past, were strengthened. Divisional human resources managers, although still reporting to their divisional chiefs now commit 40% of their time to corporate activities through the corporate people management function. A key element of the projects being run by corporate and divisional human resources is the re-development of the senior management program into shorter modules that can be offered at the divisional level. The emphasis on personal development in the original program has been attenuated and a greater focus on common organisational themes, such as leadership, team management and the management of poor performance, has been introduced. This co-operative approach between corporate and divisional levels in the organisation is part of the cultural shift towards Dr Garrett's one-CSIRO.

At the management level, therefore, the Commonwealth Scientific and Industrial Research Organisation has moved to operate a more corporate approach to training and development, using the learning and development internal consulting activities as a major lever in the introduction of new strategic directions and change. At the divisional level, however, the diversity of training and development approaches continues.

Adopting accredited training

Qualifications for scientific staff at the Commonwealth Scientific and Industrial Research Organisation are from the higher education sector. Over 1700 employees hold doctoral qualifications and 46% have attained a postgraduate qualification.

In this environment, vocational qualifications are not sought by employees or the organisation. The training and development activities organised for employees are to meet specific internal needs of the organisation rather than provide qualifications for the workforce.

However, the Commonwealth Scientific and Industrial Research Organisation offers a Project Leaders Program (PLP) to its staff and external project leaders or potential project leaders. The Project Leaders Program is intensive, highly participative and practical, involving course work and an action learning project in the workplace. Participants complete two major assignments and an action learning project which require approximately five hours per week during the five-month period. The program has been accredited by the Management Education Board of the Association of Professional Engineers, Scientists and Managers Australia (APESMA) at the postgraduate level. Successful completion of the Project Leaders Program gains one unit credit or one quarter of the Graduate Certificate (Technology Management) via the APESMA–Deakin University. The Project Leaders Program articulates into seven different specialist graduate certificate streams including general management, research and development, project management, quality, human resource management, marketing and finance.

Responding to individuals needs

The training of scientists through an essentially on-the-job approach is driven by the new performance management system which predominates at the divisional level. The divisions also offer a variety of management programs for their project managers and team leaders, usually mounted by external consultants. However, the approach of these training and development activities can differ significantly from one division to another depending on the importance attached to training activities by divisional management.

Evaluating the training

The Commonwealth Scientific and Industrial Research Organisation has yet to implement a full system of evaluation of its training and development activities. Immediate post-course questionnaires have been used regularly throughout the organisation, but there is little evaluation beyond the immediate level.

However, the organisation conducts staff satisfaction surveys every year and collects information from staff leaving the organisation. In addition, focus groups of staff have been organised in the past for the enterprise bargaining process. The findings in all of these forums showed staff were concerned about a lack of management and leadership skills at middle management levels. As a result of these findings, the recent emphasis of training has been on the development of leadership, interpersonal skills and project management, including marketing and commercialisation to develop new opportunities for research and technology transfer projects.

Gerard Industries Pty Ltd—Clipsal

Background

Gerard Industries Pty Ltd is the founding company behind the Clipsal brand of electrical accessories. This family-owned business was founded by Alfred Gerard in Adelaide, South Australia, in 1907 to supply electrical accessories. Today, the Clipsal name appears on over 20 000 products in over 25 countries on five continents. Gerard Industries' head office and the principal manufacturing facility occupies most of the inner Adelaide suburb of Bowden, covering an area of over 12 hectares and sustaining a workforce of over 1600. There are now around 2500 employees in South Australia with 3500 employees in the Clipsal 'family' in Australia.

Robert Gerard took over the running of the family's company in 1976 and has been recognised by the business community as an outstanding entrepreneur with exceptional business acumen. The company's long-term plan was to make Clipsal the biggest brand of electrical accessories in the world. Within a few years Robert had transformed the Clipsal brand into the number one brand of electrical accessories in Australia and Asia, and among the top five brands in the world. He describes the company as the 'Coca Cola™ of the electrical industry'.

The Clipsal culture

Three main features are very important in the organisational culture at Gerard Industries. These include focussing on family values, coping with cultural diversity and providing learning support to employees.

Focussing on family values

Throughout the past 80 years, Gerard Industries has always recognised the importance of 'family' loyalty with employees, customers and business partners alike. The company has had very stable management over that time and maintains a low turnover of employees. This global company has a large, efficient infrastructure which is supported by a relatively flat management structure and open communication. Open communication is valued by Gerard Industries as this ensures that new ideas are fed back to management from customers and employees. Management therefore values the ideas of employees, and encourages employees to listen to customers, in order to drive the organisational culture to be creative and innovative.

Gerard Industries has established and maintains 'family values' of respect for and interest in individual employees. Training and social activities for employees emphasise 'breaking down the barriers' between the many different cultural groups and between management and employees. Appropriate recognition is given to employees such as the 25-Year Club for those who have been employed with the company for 25 years or more. Currently, there is in excess of 140 members in the 25-Year Club.

Company-subsidised social activities include the annual picnic, which is held in March and attended by 2500 people, the Christmas party for children of employees and the annual ball which attracts 800 people. The company also sponsors sporting activities for employees (for example, the gymnasium, darts club, golf tournament and pedal prix team). There is a company-wide 'Clipsal Social Club' and social clubs in individual plants, which arrange social activities and may raise funds for charities. The 'Clipsal Olympic Appeal Committee' continues to raise substantial funds through its activities and these funds are now given to a different organisation each year (for example, the Royal Adelaide Hospital was the beneficiary in 2002).

Similar 'family values' are extended to customers, for example, the 'Club Clipsal International' for high-end spenders. The company relies heavily on feedback from the customers to provide its market-driven business planning, and so customers are listened to and looked after. Similarly, the electrical contractors spend several days at the company's Strathalbyn Training Centre. Listening to customers, which increases understanding of customers' needs, is part of the culture, business strategy and training approach at Gerard Industries.

In a similar way, the Regency TAFE education managers have been taken to the Strathalbyn Training Centre to meet with the company's apprentices in order to 'break down the barriers' and improve off-site training. The TAFE staff also visit the apprentices in the workplace regularly and talk to the on-site training supervisors.

Coping with cultural diversity

Gerard Industries employees in Adelaide include people from more than 60 different cultural backgrounds. Thus, social and team activities emphasise 'getting to know the people you work with' and are an extension of the formal induction training, which covers understanding different cultures. In the induction training, new employees are encouraged to use the specialist workplace trainer as mentor for the first few weeks. However, in a short time, they feel comfortable about approaching their leading hand or supervisor with any problems they may have.

Cultural diversity and understanding may be further discussed within the work group. For example, managers, supervisors and their team members can socialise and discuss their work more openly at luncheons at the Strathalbyn Training Centre. The teams tend to become a 'family' and supervisors will attend the weddings or other special functions of their team members.

Providing learning support

The company encourages employees to further their education through short courses, TAFE certificates, diplomas, university degrees or postgraduate degrees including master of business administration (MBA).

Gerard Industries has a close relationship with the Engineering Employers' Association South Australia and uses their group training scheme to employ and provide training support for its apprentices. However, with the continued expansion of Gerard Industries, most apprentices, on completion of their apprenticeship, are employed by the company.

The company, through its enterprise bargaining agreement, team meetings and company or department newsletters, encourages recognition for individual and team effort. For example, managers and team leaders encourage employees to closely follow the production graphs to ensure the desired weekly production levels are met. Thus, team effort and a bonus scheme are used to encourage staff to improve work efficiencies without comprising quality.

Linking training practices to business strategy

Over the years, the company has diversified into many areas, but its objectives always remain the same—to provide the highest quality products and services by employing the best people. This section identifies nine strategies which have contributed to the success of this global company. In addition, this section describes how the training practices at Clipsal are linked to the main business strategies.

The Clipsal strategies

Gerard Industries depends on four major business strategies to maintain and improve its bottomline. These include listening to its customers, long-term planning, forming strategic partnerships and being self-sufficient. Other strategies are investing in new plant and equipment, continuing to review all processes, and supporting employees, the community and the environment. These nine strategies should ensure that Gerard Industries maintains its competitive advantage for the next 80 years.

Listening to its customers

The company relies heavily on feedback from the customers. Representatives of the Club Clipsal International and directors of the company form a council which meets regularly.

Employees, particularly engineers and designers, are encouraged to communicate with the electrical contractors at their company-sponsored visits. This is particularly encouraged by Gerard Industries in order to increase the understanding of customers' needs. The specialist requirements of the industrial area often make it necessary for products to be custom-built to a customer's particular requirements.

There is a direct customer 'hotline' for customers to telephone departments with queries or complaints. If a product that has been sold to the customer does not meet requirements, the department accepts returns, seeks advice from engineers and other experts, before writing a report for the sales staff and for the customer.

Planning for the long-term

The success of the Clipsal brand is the result of a long-term plan whereby the company concentrates its efforts on entering developing markets where major building program are underway (for example, China, Malaysia, India and South Africa).

Forming strategic partnerships

In the 1970s, a partnership was formed between Gerard Industries and Gold Peak, a family-owned business in Hong Kong, to supply electrical accessories to meet British standards firstly in Hong Kong, then Singapore, Malaysia and other countries. The establishment of Clipsal UK to sell products throughout the United Kingdom soon followed.

Gerard Industries plans to continue growing. This objective recently resulted in a change of its alliance within European countries. Clipsal Moeller, a joint venture with a European manufacturer that wanted to move into the Australian market, has now been established, so that Gerard Industries can increase their market in Europe.

Being self-sufficient

A key to the success of Gerard Industries is its self-sufficiency. Gerard Industries starts with the raw materials and manufactures, assembles, markets, packages and distributes its products worldwide. The company's own advertising, display and marketing departments are located at the Bowden site, while the Custom Group, also owned by Gerard Industries and situated at Brompton, produces all of the company's printing, packaging and carton needs.

Four distinct Clipsal business units have been created to provide a more defined marketing focus for the growing product range. These are Clipsal Electrical Accessories, Clipsal Industrial, Clipsal Integrated Systems and Clipsal DataComms. The satellite factories (see *Supporting the community* below) have been set up to focus on the manufacture and assembly of components and products for their own specific business unit. It is a very structured approach to manufacturing which works extremely well for the company, its staff and customers, by enabling each area to concentrate on specific product groups, focus resources, lower manufacturing costs and provide quick response times.

Investing in new plant and equipment

In the 1980s, factories were established in Sri Lanka, Malaysia, Indonesia and Singapore, and Elcon-Clipsal (India) Limited was established as a joint venture with one of India's leading manufacturers of electrical switchgear. Through the alliance with Gold Peak in Hong Kong, the way was opened to manufacture Clipsal products in China. In 1993, Gerard Industries began its '30-year plan' to push the Clipsal product range into South Africa. A factory was subsequently established in Johannesburg.

The Gerard Industries group of companies has expanded into many diverse commercial areas. These include Clipsal Vision Super Screens, the Custom Group and Gerard Plantations, one of Australia's largest privately owned pine plantations.

Continuing to review processes

'Clipsal 21' is a new project set up to review all manufacturing processes within Gerard Industries. A group of key managers has been selected to manage this review. The focus is on sustainability of the company for another 80 years and will include strategies to improve efficiency, reduce costs and be more competitive (for example, against future international competitors from China and Europe).

Supporting its employees

As has already been mentioned, employees are treated as 'family' members at Gerard Industries. Individuals are respected, trusted, valued and rewarded. The company is committed to open communication, listening to employees, and supporting their learning to prepare them for change and increase creativity and innovation.

The company encourages employees to further their education by providing on-site training courses and paying course fees at TAFE or university as appropriate. The company commitment to quality training is also reflected by the establishment of its residential training centre at Strathalbyn which is in a rural setting 42 km from Adelaide.

Supporting the community

From its earliest days Gerard Industries has maintained a strong sense of community spirit which is reflected not only in the establishment of its rural-based satellite factories, but also in its wide-ranging sponsorships. Gerard Industries' largest sponsorship commitment was to the Sydney 2000 Olympic Games, but it is now well known for its sponsorship of the Clipsal 500, the V8 touring car race, held annually in Adelaide.

The company's satellite factories were inspired by the decentralised 'manufacturing cells' of large manufacturers in Germany. Gerard Industries has established four satellite factories in South Australia—Strathalbyn, Nuriootpa, Murray Bridge and Wingfield. Each represents a two-way partnership between Gerard Industries and the local community. The company provides the jobs where they are needed and the community provides good-quality personnel and a pleasant working environment.

Supporting the environment

Gerard Industries is also committed to caring for the environment (for example, Gerard Plantations was established in 1983, and 300 acres of new pine trees are planted every year). It has a focus on sustainable agriculture and resource and energy conservation. Recycling is an important consideration in all of the Clipsal Plants (for example, in the injection moulding plant products are manufactured from a combination of new and recycled plastic granules). Clipsal also has a range of energy management products such as Clipsal C-Bus, a fully programmable energy management system that controls and monitors lighting in commercial buildings, and the Minder Home Automation System.

Linking training to business needs

The training practices are linked to the main business strategies because the great majority of employees are operatives and the work-based training at Gerard Industries focusses on team-building, computer skills, quality improvement, and occupational health and safety. There is also a focus on leadership and management training. The company also provides on-the-job training for 74 apprentices spread over 14 trade areas (for example, machinists and toolmakers in the metal, engineering and related services industry).

Each manager has responsibility for the arrangement of the training for his or her employees from a choice of off-site courses, courses provided on site or on-the-job training. Leading hands and supervisors train and mentor process workers to meet production goals. Employees have a responsibility to meet short- and long-term objectives. Employees may also choose to attend further education and training courses.

The group training and development manager consults with managers and employees to develop a group training plan. This plan schedules in-house training courses for the following six months. International quality standards and national industry competency standards are maintained so that all employees need to be trained to meet quality, industry and occupational health and safety standards.

The 'Clipsal 21' project is currently reviewing all manufacturing processes in the company and it should result in a new group business strategy. It is expected that this strategy will drive future training and development plans.

Responding to workplace change

There has been enormous workplace change at Gerard Industries in the last two decades and most rapidly in the last two or three years. This change is mostly caused by investment in new technology and plants and an expanding global market.

It has become uneconomical to maintain old machinery and so plant equipment is changed more frequently. As new equipment is introduced it tends to be more automated. For example, the fully automated $500 000 Mikron machines at Plant 11 at Bowden are complete machining centres, capable of simultaneously machining, tapping, drilling and even inserting screws. In other words, the machine takes the raw materials and produces a finished product in a fraction of the time that it took previously.

Employment practices continue to change and this has meant increasing workforce flexibility through multi-skilling for a variety of tasks, working in teams and more flexible working hours. At present most production plants at Bowden run three shifts per day on five days a week. This allows maintenance, and overtime when required, to take place on Saturday. By comparison, the more automated injection moulding plant runs for 24 hours a day and seven days per week.

Change-management is recognised as important at Gerard Industries and the emphasis is on open communication, training needs analysis and leadership. At Gerard Industries the employees are made aware of the forthcoming changes that are coming and have adapted well. (There are possibly only 3 out of 250 operatives now who do not like change.)

The company is aware of the need to improve the skills of process workers. An emphasis in the last decade has been on raising their workplace literacy skills to ensure occupational health and safety and quality procedures are followed. A focus of the current group training plan has been the development of computer literacy and related skills for those employees who need them. Most Gerard Industries employees will need to be computer literate.

Most significantly, workplace change continues to drive the skill levels for operatives to higher levels. The process workers will need to become more technically skilled and knowledgeable, with problem-solving, quality maintenance and decision-making incorporated into their jobs. The process workers have previously relied on supervisors to make decisions for them. The supervisors, or leading hands, currently have hands-on experience and determine the problem, make decisions, allocate jobs and mentor their team members.

Training, along with all manufacturing processes in the company, is currently under review. Online learning opportunities are being explored for possible use in future. In particular, the delivery of training to employees working in other states and territories is being reviewed.

Gerard Industries does not see itself becoming a registered training organisation in its own right because of the diversity of its training needs. It has dedicated training rooms on site and a residential training centre at Strathalbyn. It is therefore providing formal, customised and accredited training to employees and a culture which supports learning.

The focus of training at Gerard Industries is now on maintaining a competitive advantage, especially through innovation and increased efficiencies.

Training at Clipsal

This section discusses the training practices at Gerard Industries in terms of other elements which contribute to successful training practices. These elements reflect increasing diversity of training and learning approaches, responding to the needs of individuals, decentralising training within the organisation and evaluating the success of training.

Increasing diversity of training and learning approaches

Gerard Industries uses a variety of formal and informal approaches to training and learning. *Formal training* includes training courses that lead to external qualifications through VET and higher education institutions and short courses provided by an external provider or specialist workplace trainer. The most prevalent forms of formal work-based training at Gerard Industries include induction training, supervisor and management training, team training, computer training, occupational health and safety training, quality assurance training, and trade skills training.

Informal training includes incidental learning in work situations and elsewhere (for example, through networking in business and professional organisations). Sometimes this also includes planned and explicit approaches to learning introduced in work organisations and elsewhere, which are not recognised within the formal education and training system. Informal approaches to learning used at Gerard Industries include employees talking with customers; for example, at the regular visits arranged for contractors, and project-based learning approaches.

The company is driven by the market and believes that creativity and innovation come from listening to the customers and valuing their employees. This encourages self-study to gain new ideas and to solve problems, especially among engineers and technicians.

In the context of formal training, Gerard Industries uses a combination of external training providers and in-house workplace trainers and assessors to provide formal training. The company encourages employees to further their education and development through short courses, and VET or university courses. The company supports this training either through provision of courses on site in work time or paying fees for courses undertaken in the employee's own time. In particular, where it meets current or future company needs, the company supports employees undertaking nationally-accredited courses from VET providers or universities.

The company provides on-the-job training for 74 trade skills apprentices in 14 trades. In areas where future skills shortages are predicted, the group training and development manager will consider increasing the numbers of apprentices (for example, metal and engineering) or encourage employees to undertake further training.

Training providers are selected by the group training and development manager for delivery of specific skills training, such as computer training. The recent group training plan scheduled an external provider to deliver computer training on the Bowden site for two days per week. These full-day training courses included an introduction to computers, and beginner, intermediate and advanced level courses for Microsoft Word, Excel, Access, PowerPoint, Outlook and Explorer.

Gerard Industries staff, supervisors and managers work with the staff from the VET providers to ensure the courses which they develop meet the needs of Clipsal employees. For example, TAFE institutes deliver training for leadership, supervisory development and Frontline Management Initiative Programs.

The company also has qualified workplace trainers who prepare in-house learning materials and systematically deliver formal induction training for new process workers. The in-house trainers also deliver other training programs (for example, for conflict resolution, stress management, listening skills and other communication skills).

The residential training centre at Strathalbyn is increasingly being used for improving team performance as it assists with socialising and 'breaking down the barriers' between managers and staff and between the many different cultural groups. Team leaders, leading hands and supervisors are expected to mentor their team members on the job and so this often follows a formal and structured approach. Learning in the team is also important at Gerard Industries and this can be through formal approaches, such as team meetings and training sessions.

Gerard Industries also uses project-based learning approaches by assigning managers and other staff to specific projects, such as the current review of all manufacturing processes in the 'Clipsal 21' project.

Although already using a variety of training approaches, the company is likely in the future to further increase the diversity of training and learning approaches. For example, formal online learning opportunities are being explored for possible use. In particular, the delivery of training to employees working in other states and territories is being reviewed. Many of the 150 Clipsal sales representatives are specialist representatives in areas such as industrial electrical accessories, integrated systems and data and communication accessories.

Decentralising the training within the organisation

The group training and development manager is the central training co-ordinator who acts as broker for training arrangements. The group training and development manager co-ordinates training courses required by managers and employees and negotiates with external training providers to provide customised training to suit managers and individuals, co-ordinates in-house training and acts as co-ordinator for apprenticeship training.

The group training and development manager is responsible for developing a group training plan in consultation with managers and employees. He also maintains the education and training database of the company's personnel records in which he records the training completed by individual employees.

External TAFE providers, such as Regency TAFE, are used for the off-the-job training for trade apprentices. This is because the Gerard Industries group of companies requires skilled tradespersons in at least 14 different trades. The variety of training, the increased cost of maintaining up-to-date training materials and equipment (for 74 apprentices at present), and the need for contact with others in the industry are reasons cited for abandoning their previous on-site apprentice training centre.

Gerard Industries has around 50 workplace assessors on the Bowden site and two specialist workplace trainers in Clipsal Integrated Systems.

Because of the large size of the workforce in Adelaide, Gerard Industries is able to obtain customised training at competitive prices. With dedicated training rooms on site, it can have customised training delivered on site by external providers.

Responding to the needs of the individual

Gerard Industries responds to the needs of the individual and will provide training appropriate to their needs. Employees are encouraged to discuss their training requirements with their supervisor, line manager or with the group training and development manager.

Employees may also determine their own career goals and so initiate further education and training. If the employee-initiated training is in line with current or future needs of the department, the company will reimburse the course fees.

Evaluating the success of training

At Gerard Industries the feedback from individual workers, workplace trainers and assessors, managers, customers and other stakeholders is valued. To provide evaluation of the training, course participants complete formal feedback forms. In addition, feedback from the annual employee performance reviews increases the information on the success of training initiatives and the need for further training.

The human resources manager oversees the annual employee performance reviews which are conducted by managers for each of their teams. The review also identifies the training needs of the employee. These include the skills and knowledge needed to meet company expectations (employer-initiated training) and also the employee's own goals (employee-initiated training). These are recorded in the personnel records database within education and training section. This record subsequently assists with the planning of future training. For example, every six months there is a performance assessment where apprentices are assessed and asked to identify their goals within the company.

In addition, customers and training provider staff are encouraged to talk to company staff. This highlights continuous improvement in training and ongoing learning within the company. It is an essential element for a successful training practice.

As the 'Clipsal 21' project is currently reviewing all manufacturing processes at Gerard Industries, training will also be reviewed.

Southcorp—Lindemans Karadoc winery

Background

Southcorp Ltd is Australia's largest winemaker and exporter and is in the top ten wine producers globally. Southcorp Wines' brands are associated with the founders of the Australian wine industry and include Penfolds, Lindemans and Rosemount Estate.

In February 2001, Southcorp's goal to become a pure wine company was further enhanced by the $1.5 billion merger with Rosemount Estates, Australia's largest family-owned winery. This combination created one of the largest wine companies in the world and the world's largest premium wine company. Southcorp produces more than 10 million cases of premium branded wine per year and exports to more than 80 countries. Southcorp generates annual revenues in excess of A$1 billion per annum.

Southcorp markets over 500 different labels from limited-release vintages such as Australia's best-known red wine, 'Grange', to Lindemans Bin 65 Chardonnay, the largest-selling Australian white wine in the United States market. Their wines routinely excel at international shows.

Export growth is underpinned by extensive international marketing operations. Marketing subsidiaries are located in the United Kingdom, the United States, New Zealand and Singapore.

More than 6000 hectares of vineyards are operated throughout the main grape-growing regions of south eastern Australia. The company also has operations in Margaret River in Western Australia, California and Southern France.

The year 2001 was one of significant change for Southcorp. It was highlighted by major restructuring of the company through the merger with Rosemount Estates and the sale of non-wine subsidiaries. The transformation from a diversified industrial company to a pure wine company was completed in 2001 with the divestment of the Southcorp Water Heaters group.

Southcorp's objectives are to:

- maximise shareholder value
- consistently exceed consumer expectation with wine quality
- be a reliable and preferred supplier—the entire chain must profit
- constantly improve wine and packaging quality
- create a working environment that excites people and invites them to excel
- be flexible and innovative
- act professionally with honesty and integrity—earn respect
- develop a culture which combines the best of family values and corporate strength.

This case study focusses on Lindemans Karadoc Winery which was established in 1973 near the Victorian town of Mildura. Karadoc is a prime example of the enormous investment made in Australian winemaking. It is one of the most modern and well-equipped winery and packaging facilities in the world.

The Southcorp culture

Three main features dominate the organisational culture at Southcorp and Lindemans Karadoc Winery. These include focussing on family values, maximising corporate strength and providing learning support for employees.

Focussing on family values

The merger with Australia's largest family owned winery, Rosemount Estate, has increased the focus on family values. One of the new objectives is to develop a culture which combines the best of family values and corporate strength. Family values include respect for individuals, open communication and harmony in the workplace.

In order for the company to continue to be reliable, flexible, innovative and exceed customer expectations of wine quality, the company aims to create a working environment that excites its people and invites them to excel. For this environment, listening to the views of employees and other stakeholders is also important. Valuing individual employees is fundamental to the enhancement of diligence, creativity, innovation and loyalty to the company. Southcorp recognises that its people are its most valuable resource.

Maximising corporate strengths

The company's core operating principles include investing significantly in core brands and reducing cost and waste to fund growth investment. There is an emphasis on constantly improving wine and packaging quality. Other corporate operating principles include leverage of strengths globally and promotion of results-oriented teamwork.

Benefits of a corporation include the systems and procedures which ensure the integrity of work processes across a large organisation. Thus, at Karadoc, detailed training records are kept relating to an individual's training and the number of employees trained on each piece of equipment. Detailed planning is required for the vintage period when the workforce trebles.

The large infrastructure at Southcorp is supported by a relatively flat management structure and matrix management across the wineries and regions (for example, the Karadoc winemaker reports to Southcorp's chief winemaker, and engineers and human resource personnel have a regional role).

The winemaker may need to blend crushes from different vineyards and wineries into the one blend. Hence, tankers move wine from one winery to another for the blending process.

To maintain high-quality standards and consistency, production is managed through a network of eight wineries, including three major centres for super premium, premium, and sparkling wines. In addition, their red wine maturation facility at Nuriootpa, South Australia, is the largest of its kind in the world.

Providing learning support

Southcorp staff have been involved in the industry development of the standards for the national Food Processing Training Package qualifications. However, not all sites have adopted the Australian Qualifications Framework (AQF) system.

At the Karadoc site, the enterprise agreement refers to the implementation of the Australian Qualifications Framework system. This indicates that the company encourages Lindemans Karadoc employees to gain national qualifications in food processing by paying enrolment fees and providing training on site through external providers such as TAFE. In particular, the company also pays enrolment fees and facilitates training on site for seasonal workers to gain national qualifications. This has encouraged them to higher skill levels and also to return to Lindemans Karadoc Winery each vintage.

The workforce at the Karadoc site has been stable, with a number of staff there being employed for over 20 years. By encouraging further skill development and learning by its employees, the company aims to retain its employees and enhance its reputation as an employer of high-quality employees. The management believes that this reputation assists the company to attract high-quality applicants when it recruits additional workers.

The company provides training for staff to meet international quality standards for food safety, quality assurance, environmental protection and occupational health, safety and welfare. In addition, it supports employees who desire to undertake further education and training (for example, a production worker who wants to do a winemaking course).

Linking training practices to business strategy

The Southcorp strategies

Southcorp's mission is to be the leading global branded wine company. Its objective is to generate superior shareholder value by:

- continually enhancing the value of its brands
- providing outstanding value for customers
- delivering world-class business performance
- demonstrating that people are the company's most important resource
- behaving with integrity.

Southcorp also aims to be the leader in market segments in which it chooses to compete, and to create consumer demand and superior branding. Since 2001, some of the philosophies and strategies from the Rosemount business model have been incorporated to form the new Southcorp. The company is dependent on six major strategies.

Listening to the customers—the 'demand driven' approach.

At the core of the new Southcorp business model is a 'demand-driven' approach to managing the business. The forecast market demand is updated monthly by divisional sales people. This approach ensures that capital resources are focussed on creating award-winning premium wines with high consumer acceptance. This delivers strong marketing and promotional support to reinforce brand association.

Maintaining world's best practice

Southcorp aims to deliver superior value to its shareholders and customers through the performance of its people and the achievement of world's best practice in business operations and environmentally responsible operations. It demonstrates its commitment to its people through excellence in workplace safety, performance management and leadership development.

International quality standards for food safety (Hazards Analysis and Critical Control Point), quality assurance (International Standards Organisation ISO9000), environmental management (ISO14001) must be maintained. Similarly standards and legislative requirements for food processing, occupational health, safety and welfare are also maintained. This involves a number of different systems including those for Australia, United Kingdom and the United States of America (for example, Standards Australia's Quality Assurance Services). At Southcorp, these standards and related policies, have been combined into an integrated loss control policy.

Lindemans wines are known for their outstanding consistency of quality, vintage after vintage. This consistency is achieved firstly by Lindemans' firm adherence to the style formula for each wine in the range. It is likely that Lindemans Karadoc Winery would have significantly contributed to Lindemans being named International Winery of the Year by *Wine & Spirit* magazine in the United States for 10 out of 12 years.

Supporting employees

Southcorp recognises that its people are its most valuable resource and so the company provides training to meet the international quality standards for food safety, quality and environment management and training which is also designed to develop the skills of employees.

The Lindemans Karadoc Winery management supports employees, and seasonal workers, to gain national qualifications in food processing (wine sector) by paying enrolment fees and providing training rooms on site for the use of external providers such as TAFE. Management believes that, through multi-skilling, training increases the capability and flexibility of the workforce. It also increases the stability of the workforce by enhancing employee morale and loyalty.

Train the trainer (now Certificate IV in Workplace Training and Assessing) and Frontline Management training courses are customised by external training providers, such as TAFE, for co-ordinators and supervisors and delivered on site at Karadoc. Laboratory staff and other professional staff in general have university qualifications.

Management roles of professional staff (for example, engineers and human resource managers) are cross-organisational. Thus there are close links between staff on regional sites. As vacancies arise, cross-organisational movement is also possible.

Supporting growers to improve quality

Lindemans Karadoc Winery mostly contracts local growers for its 56 000 tonne crush. The industry has seen a major change with the drive to quality of grapes, especially for premium wines. Improving quality at this scale is a challenge for Lindemans Karadoc staff. This has meant that growers and handlers must be aware of standards to maintain quality (especially aware of oxygen levels and microbe spoilage).

Lindemans Karadoc established a Growers Training Centre on the Karadoc site and three staff (called the Grower Liaison Group) are employed to work closely with the growers to assist them to improve the quality of grapes and thus increase their profits. The grapes are now graded in the field and end-use contracts are signed, that is, the price paid to the grower depends on the final quality and the particular wine in which the grapes are used. This contrasts to grape contracts that were determined by quantity and not quality.

The Grower Liaison Group has provided local grape growers with information about the wine industry and training for changes in growing and handling practices. For example, smaller grapes, with more concentrated flavour, are required for premium wines. This is a great contrast from the local dried fruit industry, sultanas for example, in which many of the local grape growers were previously involved. They have seen a progressive change from flood irrigation to overhead sprinkler systems, but these still provided excess water and so increased the size of the grapes. The viticulturist now uses microprocessor-controlled technology to monitor the soil moisture level and drip irrigation to minimise evaporation and deliver exactly the amount of water that is need by the plant. This method of watering is also most environmentally sustainable as it does not increase salinity of the soil and, in addition, water can be further conserved when recycled water is used.

The work with growers and handlers at the Lindemans Karadoc Winery epitomises the Southcorp philosophy that, for Southcorp to prosper, the whole business chain must prosper.

Investing in new plant and equipment

Due to exceptional growth in the global market, there has been pressure to increase efficiency and reduce wastage to fund investment in new technology and microprocessor-controlled production. Workplace safety is fundamental and so new equipment and processes are designed for improved workplace safety. The quality and consistency of the wine are paramount and so production is mostly microprocessor-controlled. The storage capacity has had to be greatly enlarged, with 93 million litres processed on the Karadoc site. Huge stainless steel tanks are increasingly used to cope with this large capacity; for example, three 1.5 million litre tanks are used to blend the wine for Lindemans Bin 65 Chardonnay and around 10 blends per year are assigned for packaging.

Supporting the environment

Southcorp has recently made a major investment in a new computer system for the company. It demonstrates its commitment to environmental sustainability by moving towards integrating the comprehensive Southcorp Environmental Management System (SEMS) into the company's daily operations. The system initiatives have included reductions in the quantities of chemicals used and the wastes produced as a result of manufacturing. A focus has also been placed on water and energy conservation.

Other environmental initiatives have included the creation of an alliance with the Australian Conservation Foundation designed to address the issues of salinity and sustainable agriculture.

Linking training to business needs

At Southcorp, the international standards for food safety, quality assurance and environmental management, and related policies for food processing, occupational health and safety have been combined into an integrated loss control policy. All employees must undertake a training program to ensure they understand the elements of the loss-control policy and can identify hazards.

Under the integrated loss-control policy, any incidents which relate to workplace safety, quality, food processing or environment protection must be reported. The same form is used to report all elements. The Loss Control Committee, which is the occupational health and safety committee, also oversees the other elements for which there are separate committees (for example, Hazards Analysis and Critical Control Point, Environment, Quality). An internal audit is conducted each month for one of these elements. (Initially all four elements were audited monthly.) An external audit of compliance with all the standards is conducted annually.

The Lindemans Karadoc Winery has 45 salaried employees (that is, on staff all year) but the number of workers increases to around 130 with seasonal labour for the vintage. Seasonal workers are used in the cellar during the first half of the year from January to May. The bulk of the seasonal workers are employed for three months through a Mildura labour-hire company. The local labour-hire company (Atria) conducts interviews, aptitude tests and inductions and sends a selection of people to Southcorp. At the winery, Southcorp personnel conduct interviews and select contract workers to attend the company's in-house one-day induction course which covers the elements of the Southcorp integrated loss control policy and hazard identification topics. Following the induction training, the company selects and places contract workers for the vintage (for example, on crushers, presses or cellar)

If staff vacancies arise at the winery, seasonal workers may apply to join the company as a salaried employee. In addition, after processing the vintage, some of the seasonal workers may gain further work in the packaging centre at the Karadoc site.

The company was aware that it needed to raise the skill standards of its workers and, in particular, the seasonal workers. It also needed to encourage the seasonal workers to return to the winery each year so that their skill levels could be further increased. In 2002, Lindemans Karadoc Winery encouraged the seasonal workers to undertake training for AQF qualifications and paid for the TAFE course. The company believes that more qualified workers are able to do work more effectively and operate more equipment. This increases the flexibility of the workforce and also the efficiency of production.

About a third of the seasonal workers now comprise local residents, including growers, who work in the Lindemans Karadoc Winery during vintage every year. There are also seasonal circuit workers, who may spend winter in North Queensland picking capsicums, but now return to Lindemans Karadoc Winery for every vintage. There are now considerably fewer seasonal labourers categorised as 'drifters' as these tend to have low skill levels.

Much of the equipment used in the vintage, such as crushers, is operated for only three months of the year. During this period however, it must operate over three shifts a day for seven days a week as processing the grapes is time-critical. Thus, during the time before vintage, the existing equipment must be maintained and prepared in readiness for peak performance. The crush is centrifuged, fermented, press-filtered and stored in temperature-controlled tanks according to the winemaker's instructions.

Storage tanks are generally very large and the storing process is controlled by microprocessors. Blending is also done in very large tanks which are also micro-processor-controlled. Thus, the second half of the year in the cellar is, by comparison to vintage time, less hectic. This is where training for Karadoc employees is concentrated and new equipment is installed and tested.

Responding to workplace change

Since the establishment of the Karadoc site in 1973, the development and introduction of new winery and packaging technology has been instrumental in maintaining Lindemans cost and quality advantage. The development resulted from the need for an efficient, low-cost production facility which would also improve quality and increase flexibility. Instrumental in achieving this goal has been the high level of automation and degree of technical excellence employed at the site—from automated grape handling and continuous grape pressing to robotic case packing and micro-processor control of packaging lines.

Process changes introduced over the years include:

- the development of micro-processor control of operations in both the winery and packaging centre
- the use of bulk stainless steel vessels, fully insulated and refrigerated for storage of wines required for packaging on an on-demand basis

- the automation of packaging operations in order to reduce costs, improve quality and increase operational flexibility
- the introduction of high-speed pressure-sensitive labelling, resulting in lower packaging material costs, reduced labour requirements and improved product appearance. It has also provided the marketing department with unlimited opportunity and flexibility when it comes to label design.

The company is aware of the need to improve the skills of process workers. It believes that the formal and accredited training offered to employees, and extended to seasonal workers in 2002, will encourage the development of a more stable workforce, despite the seasonal nature of the work.

As a result of further workplace changes, the process workers will need to become even more technically skilled and knowledgeable, with problem-solving, quality maintenance and decision-making skills comprising a major part of their jobs. The company is aware that there is a long-term issue of providing post-trade or certificate IV level training for process workers (not currently available at Karadoc site).

In addition, the market-driven approach to production reduces the time to plan and manage production and thus, increases the need for flexibility in the workplace.

Training at Karadoc

The training practices at Lindemans Karadoc Winery reflect increasing diversity of training and learning approaches, adopting accredited training, responding to the needs of individuals, decentralising training within the organisation and evaluating the training.

Increasing diversity of training and learning approaches

Lindemans Karadoc Winery uses a variety of formal and informal approaches to training and learning. The most widely used forms of formal work-based training include induction training, operatives training, team training, supervisor and management training, computer training, occupational health and safety training, and quality assurance training. Informal approaches to learning include employees talking with workers at other winery sites.

The cellar training co-ordinator at the winery itself schedules and records the formal training of employees within the wine production areas. This employee works closely with the packaging training co-ordinator as there is some overlap in workers with some cellar workers moving to the packaging centre when the vintage has finished.

For cellar employees training is delivered by both external registered training providers and in-house workplace trainers. The compulsory modules for the Food Processing Certificate (food safety, occupational health and safety, quality assurance and communication) are delivered by the registered training organisation selected by the company (currently, Mildura campus of Sunraysia Institute of TAFE), while the cellar-specific equipment training is delivered by in-house workplace trainers. Training in optional topics (for example, operate a fork lift and participate in teams) is delivered by both the registered training organisation and workplace trainers.

Lindemans Karadoc staff have been involved in the development of the training modules for each piece of equipment in the cellar. However, the rapid development of new technology in this industry means that course material for some new technology, such as membrane filtering and reverse osmosis, has not yet been written. Each training module comprises two components which are the practical procedures and the theory underpinning the equipment and the process. The trainee operates the equipment with the assistance of the workplace trainer and the competent worker until they are assessed as fully competent by the workplace assessor. The company believes that learning the theory more thoroughly, and understanding the operation in a range of scenarios, enables employees to be better at problem-solving on the job.

Adopting accredited training

The enterprise bargaining agreement at the Karadoc site endorsed the adoption of the Australian Qualifications Framework, particularly in relation to food processing skills. There was a joint management/employee committee to oversee the introduction of the Australian Qualifications Framework at the Karadoc site. Employees were transferred from the previous 10-grade Australian Standards Framework (ASF) system to the six-level AQF award system.

Since the winery's establishment in 1973, there has been a training co-ordinator at Lindemans Karadoc and so employee training records were available. It was a relatively easy task to provide individual employees with details of how they stood against the six AQF awards. The training co-ordinator was able to explain, on a one-to-one basis with each employee, what competencies they already had (recognition of prior learning) and for which competencies they could be assessed. Most workers reviewed their competencies with the workplace assessors. The training co-ordinator continues to emphasise that each employee must maintain the required standards and needs to operate at a 'tradesman' standard (AQF 3), that is, with high level knowledge and skills, and pride in their work.

The endorsement of the Australian Qualifications Framework training for Lindemans Karadoc workers in the enterprise agreement has encouraged employees to focus their learning on achieving qualifications recognised Australia-wide, a situation particularly beneficial to motivating seasonal workers, especially those who are itinerant workers, enabling them to acquire qualifications. Employees are encouraged to achieve AQF level 3 so that they are able to operate most machines.

Employees are enrolled in self-paced study programs for the Certificate of Food Processing, at present, through the Sunraysia Institute of TAFE, Mildura campus. Lindemans Karadoc has established dedicated training rooms for visiting registered training organisation staff who facilitate the self-paced study of workers, particularly in the theory component. In addition, shift co-ordinators are expected to provide on-the-job training for their team members through formal and structured approaches or more informal approaches such as mentoring and coaching.

Decentralising the training within the organisation

The training co-ordinator acts as broker for the formal training which is conducted at the winery. He negotiates with external training providers to provide customised training to suit the company, shift co-ordinators and individual workers. He co-ordinates in-house training and acts as the liaison person between trainees and the external provider.

The training co-ordinator develops a 12-month training plan for the cellar based on a needs analysis for the company. Detailed records of those workers who have been trained to use each piece of equipment, and those workers waiting to be trained on the equipment, are kept by the training co-ordinator. The needs analysis identifies training requirements for workers in each of the three shifts per day. Shift co-ordinators normally have a crew of 14 people and are responsible for the training of their staff. They must ensure that all employees get the required training and are assigned a trainer.

There are eight qualified workplace assessors in the cellar which enables two to work on each shift. Another three will be qualified in 2002 meaning that three workplace assessors can work on each shift.

Once or twice a week the TAFE lecturers are on site to assist individuals with their studies, particularly with the learning material related to the theory. This usually occurs to overlap two shifts, that is, midday to 4 pm. In this way employees are able to spend two hours of their own time with the facilitator either before or after their shift. In addition, TAFE lecturers are also able to talk to students while they are on the job as there are at least two operators for each piece of equipment during each shift.

Lindemans Karadoc staff are consulted by TAFE to ensure the training is customised to meet the company needs. The TAFE-prepared learning materials and the facilitation of learning by TAFE staff are constantly reviewed by the training co-ordinator who also monitors and records the time TAFE staff spend on site.

New employees work alongside a full-time trainer until they are able to carry out the work unsupervised. Employees are also expected to be able to train another person to use their equipment as it is believed that this further develops their skills. A graded competency assessment system is used at Lindemans Karadoc winery. When operators are assessed completely competent in both theory and practical skills they are given a rating of '5' on a five-point scale. This qualifies the operator to train other workers on this equipment. An assessment grade of '3' is an 'interim assessment' which allows the employee to operate the equipment in conjunction with a fully competent operator. There is a graded competency assessment for each piece of equipment.

Hard copies of these assessments are signed by the assessor and hardcopy and electronic records are kept by the training co-ordinator. The auditors can demand that the employer prove the competency of its operators and so documentation must be available at all times for the auditors.

Graded competency assessment rating scale used at winery

1 = Training required
2 = Training underway
3 = Interim assessment (practical operation only)
4 = Requires assessment
5 = Assessed proficient (able to train others)

The human resource manager conducts psychological and aptitude tests for new workers to assist in determining training needs. The human resource manager also co-ordinates training for managers and supervisors. Common training programs include computer skills training in Microsoft Word or Excel. In addition, training has included 'train the trainer' courses (now Certificate IV in Workplace Training and Assessing) and Frontline Management training programs accessed through TAFE but delivered on site at the winery. Lindemans Karadoc staff assist TAFE staff to develop and customise these courses to meet company needs.

Team-building training may be conducted by TAFE or in-house trainers. Learning in the team is also important and team members who have been assessed as fully competent are expected to teach co-workers to take their place on the equipment. There are also formal approaches, such as team meetings and training sessions.

There must be a trained occupational health and safety representative on each of the three shifts. Occupational health and safety representatives have undertaken the five-day training course registered with Workcover. There is also in-house training for all staff in risk and hazard assessment.

Specific technical training to develop skills required for working in confined spaces, handling dangerous goods and driving forklifts, is usually delivered and assessed by an external provider such as TAFE.

First aid training is conducted by a qualified local resident who previously worked for the Ambulance Service. The first aid trainer is also responsible for maintaining and replenishing all first aid kits on the Lindemans Karadoc site.

Responding to the needs of individuals

Modules or competencies selected for training by workers on the Karadoc site are determined by the training co-ordinator in consultation with managers. Training is based on company needs and the preferences of individual employees.

In addition, employees may determine their own career goals and so initiate plans for further education and training. If the external course selected by the employee meets current or future needs within the department, the company will reimburse the course fees.

Evaluating the training

The training co-ordinator evaluates the training through oral feedback on the training provided from individual workers, shift managers, workplace trainers, and TAFE facilitators. Information is also collected from feedback from the annual performance reviews for salaried workers.

The training co-ordinator also provides feedback to the TAFE program manager and evaluates what other training providers can offer. This highlights the importance to the company of the continuous review of programs to improve training and ongoing learning within the company. Continuous review is also an essential element for a successful training practices.

Another measure of the success of training practices is the retention of salaried and seasonal workers.

Costs and benefits

The cost of training at the Lindemans Karadoc site is not really a consideration as the company believes staff training is essential. Firstly, staff training is considered essential for managing workplace change such as the introduction of new technology and expensive equipment. Staff training is also considered essential to develop better products and services and to maintain a competitive advantage. The company also believes that training is essential to enhance staff morale and maintain its status as an employer of high-quality staff.

Training costs at Lindemans Karadoc Winery are considered minimal against the cost of new equipment. The Federal Government subsidises the cost of trainees and thus payment for the TAFE-provided training. The cost of the TAFE staff on site is covered by the course enrolment fees and TAFE also pays for the use of the on-site training facilities.

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